

Message

From: d [Ex. 6 / Personal Privacy]
Sent: 1/29/2019 7:16:55 PM
To: zkz1@cdc.gov; fjh1@cdc.gov; pjb7@cdc.gov; kif5@cdc.gov; tvs4@cdc.gov
CC: peter_clark@shaheen.senate.gov; mark.dailey@masenate.gov; ashley_coulombe@warren.senate.gov; russell.halliday@mail.house.gov; bilott@taftlaw.com; president@pffm.org; president.local1009@gmail.com; jason.burns@iafflocal1314.com; rriley08@northshore.edu; geoffdaly@mkd-usa.com; Grevatt, Peter [Grevatt.Peter@epa.gov]; Dunn, Alexandra [dunn.alexandra@epa.gov]; gpeaslee@nd.edu; lpetrick@iaff.org; pmorrison@iaff.org; paul.jacques@pffm.org; rwalsh4justice@outlook.com; [Ex. 6 / Personal Privacy] carignan@anr.msu.edu; kfent@cdc.gov; acaban@med.miami.edu; sshaw@meriresearch.org; jburgess@email.arizona.edu; pgrand@hsph.harvard.edu; hdavies@kingcounty.gov; geoff@geoffdiehl.com; holly.davies@kingcounty.gov; PaulJrCotter@charter.net; emily.sparer@mail.harvard.edu; mmaynard@NFPA.org; JPauley@nfpa.org; mustafa@hiphopcaucus.org; aropeik@nhpr.org; karen.hensel@nbcuni.com; alicia.rebello-pradas@massmail.state.ma.us; stefanit@sbcglobal.net; matthew.alba@sfgov.org; bobbyhalton@pennwell.com; [Ex. 6 / Personal Privacy] billc@pennwell.com; sylvia@toxicsaction.org; shaina@toxicsaction.org; debra@cleanproduction.org; dbond@bennington.edu; cell@ffcancer.org; [Ex. 6 / Personal Privacy] andres_hoyos@hassan.senate.gov; wuc1959@gmail.com; dalmatprod@outlook.com; fastlerner@gmail.com; maria@mariahblake.com; stephanie.ebbs@abc.com; gretchen@healthyhomeconsulting.net; ANNAISE.FOUREAU@STATE.MA.US; lyons.callie@gmail.com; andruvolinsky@gmail.com; [Ex. 6 / Personal Privacy] mick.tisbury@gmail.com; info@attorneyjaymcmahon.com; saundrea.shropshire@mail.house.gov; cdubay@nfpa.org; lhierl@vermontconservationvoters.org; mmessmer@me.com; paul.jacques@pffm.org; justine.potter@mass.gov; andres_hoyos@hassan.senate.gov; dandrews@ewg.org; John.Swords@mail.house.gov; abrown3@worchester.edu; lazenbyforportsmouth@gmail.com; rosgood@fcsn.net; rmiller@iafc.org; quintquilts@gmail.com; cell@ffcancer.org; carignan@anr.msu.edu; [Ex. 6 / Personal Privacy] shaina@toxicsaction.org; ken@ewg.org; dandrews@ewg.org; info@cswab.org; jeffknobbe@sbcglobal.net; gellison@mlive.com; geoffdaly@mkd-usa.com; geoff@geoffdiehl.com; susan@wildforcongress.com; ariel_marshall@shaheen.senate.gov; arlene@greensciencepolicy.org; jbrady@npr.org; John.Swords@mail.house.gov; schaider@silentspring.org; rparis@local718.org; rogeraklein@yahoo.co.uk; lea.senst@mail.house.gov; emery.boyer@mail.house.gov
Subject: 1.21.2019 Updated List of Civilian Fire Stations with Known PFAS Contamination
Attachments: 9.12.2018 ROB BILOTT'S LETTER TO CDC AND ATSDR ON OMISSION OF FIRE SERVICE FROM PFAS STUDY (1) (1).pdf; 2004 PFAS TESTING RESULTS.PNG

Good Afternoon,

Please excuse the long chain of emails as it is intended to show the additions of Non-military fire stations that are added monthly to the list of 'PFAS contaminated municipal and rural stations, and, to highlight the need for a National PFAS plan for the fire service. Last time the list was circulated was in August of 2018.

EWG is doing their best to cross-reference the listed stations below in an effort to verify if any are already on their national pfas tracking engine. I have done so as well but admit there may be a overlap here or there.

https://www.ewg.org/interactive-maps/2017_pfa/

The reason for singling out the fire stations that are non-military is simply that while military fire stations and training facilities are being cared for in an effort to test for PFAS and then mitigate, that is not the case for the neighborhood fire station and training facilities.

Our fear is the unknown numbers of fire-stations that are yet to be discovered.

Thankfully the DoD is testing military bases. That is not the case for civilians:

<https://taskandpurpose.com/military-drinking-water-contamination-task-force>

Here is the most updated list of civilian 'fire stations/training facilities' to be added.

Who will take on the duty to notify each fire station to test their water wells?

While we await the reply from CDC/ATSDR in response to the bipartisan petitions from Senators Shaheen and Murkowski, and Congressmen McGovern and Fitzpatrick, which seek inclusion of first responders in the National PFAS Study, we grown increasingly concerned with no plan to engage the fire service in a comprehensive study. We are aware of the various fire service related PFAS studies across the Nation, but feel it is in our best interest to seek inclusion in the currently funded National PFAS Study for the reasons listed in this September 12, 2018 letter to CDC/ATSDR by Environmental Attorney Robert Bilott (attached).

In addition, Professor of Physics, Graham Peaslee of Notre Dame is currently testing 20 years worth of 'new, never-worn' turnout gear to determine PFAS content. I have also attached his findings from January 2018 of a set of 2004 new, never-worn gear.

<https://news.nd.edu/news/researchers-study-presence-of-fluorinated-chemicals-in-firefighter-clothing/>

Sincerely,
Diane Cotter
Rindge, NH

1/21/2019

This is the only known printout I'm aware of that discusses how to test your water wells. It does list the testing facilities that will test your water. I don't have answers on how to test for your city water but you could contact your DES if you suspected your station used AFFF in years past to train.

Please help us update this list by reporting any known fire stations/training sites. It is our understanding the DoD is /was testing water on all military bases. The muni/rural fire houses have largely gone unnoticed.

https://www4.des.state.nh.us/nh-pfas-investigation/wp-content/uploads/2017/11/Fire_Department_H2OSample.pdf

KNOWN FIRE STATIONS WITH PFAS CONTAMINATION

Last Update 1/21/2019

<https://www.facebook.com/notes/your-turnout-gear-and-pfoa/instructions-for-testing-your-water-at-your-fire-stationfor-pfas/2117306748593397/>

Environmental Scientist and New Hampshire State Representative has written about the new 'short chain' chemistry and it's unknown effects in her May 2018 article, 'Firefighter Cancer Quadfecta'.

<http://nhlabornews.com/2018/05/mindi-messmer-firefighter-cancer-quadfecta/>

In October 2017, 6 out of 7 fire stations tested 'elevated' for PFAS. That prompted the New Hampshire DES to send out this letter instructing all fire stations in NH to test their water:

http://mediad.publicbroadcasting.net/p/nhpr/files/firestation_results_des_12-4-17.pdf

OCTOBER 2017., NOTICE TO ALL NEW HAMPSHIRE FIRE STATIONS:

https://www4.des.state.nh.us/.../Fire_Department_H20Sample.pdf

August, 2018, The state of Michigan listed 1,487 fire stations to the 'Potentially PFAS Contaminated Sites' list. In response to that notice, we asked Professor Peaslee his thoughts: In response to Michigan's 1487 Fire Stations on the Potential PFAS Contamination List, and in addition to the OCTOBER 2017 NH DES Notice to all New Hampshire Fire Stations... From Professor Peaslee today:

https://www.mlive.com/.../pa.../michigans_water_crisis_pfas.html

In this article, they list six fire departments that have legacy AFFF sitting on their shelves unused....and the town of Parchment is one of the six they mention....there are 35 gallons of AFFF concentrate sitting in the Parchment fire department unused. I am afraid this may indicate the source of their groundwater contamination.... Parchment is a small city (1800 residents) and city hall is attached to the fire department (which has 19 permanent employees) which also houses the city's Public Works and Water Department. All the well heads for the city's drinking water (which is from an aquifer 50 feet below the city in sandy soil) are within a mile of the FD. Since they have 35 gallons of unused AFFF sitting on their shelves at the moment, they are probably like most small towns near an interstate that purchased and practiced putting out fires you might encounter from a tanker-truck crash. Not sure they ever had a crash in this part of Kalamazoo, but they surely practiced with the foam at some point after they purchased it, otherwise they wouldn't have "leftover" foam sitting on a shelf. If they practiced anywhere within city limits, they probably washed the foam away afterwards, and nobody told them 20 years ago that AFFF would travel directly into the groundwater and last for the next few hundred years environmentally. This is pure conjecture at the moment from me., there may be another source of PFAS that comes to light eventually, but I have been telling as many people in Michigan as possible to look into it, and today Michigan listed all FD's as potential sources of PFAS and I am guessing that Parchment might be the reason for this action. In a worst-case scenario, Every "small town USA" may have purchased and used AFFF in fire stations around the country and nobody told them it was toxic, nor persistent and a danger to groundwater. Thereafter, any use or practice with this AFFF could potentially have contaminated their own drinking water. This is scary, and maybe Parchment is the only place in the country this has happened, but my bigger fear is that it is only the first place we have looked.

THE FIRE STATIONS THAT WE KNOW OF WITH HIGH LEVELS OF PFOA /PFOS :

Additionally, some the fire stations listed below came from EWG'S list of contaminated sites. These are merely the *'known' sites*.... we continue to add to this list with recent developments of more fire stations found with 3M toxic foam or that have water wells in excess of MRLs for PFOA/PFOS. Without the funding to test fire stations across the country the fire fighters that work/sleep/eat in their stations may never be informed, and we may be sitting on just the tip of the iceberg. **All, please see below for the numerous fire stations that have been contaminated by AFFF.**

<https://docs.google.com/spreadsheets/d/1HxLAzOmFdMh7V-mey4ExTPsnNkarEcGG6kIBWZH8auA/edit#gid=676990244>

ALASKA:

Fairbanks Regional Fire Training Center, PFASs found in 26/33 private wells, 19 exceeded EPA health advisory (2015); {GHU municipal water 2018 -- PFOS: 2.4-2.9 ppt, PFOA: 2.9-3.5 ppt}; {Airport -- PFOA: 6.4 - 762 ppt} GHU municipal water 2018 -- PFHxS: 5.1-5.9 ppt, PFHxA: 2.8-3.2 ppt Firefighting foam used from 1984 to 2004 in fire training exercises at the Regional Fire Training Center, and at Fairbanks International Airport since the 1980s
<https://dec.alaska.gov/spar/csp/sites/fairbanks-fire-training-center>

1/21/2019 Alaska: Dillingham Airport:

<http://dot.alaska.gov/creg/dillingham-pfas/docs/Dillingham-PFAS-Press-Release.pdf>

. Nine wells were sampled on or near airport property. The Holy Rosary Church well tested at 186 parts per trillion (ppt) for the sum of five PFAS compounds, which exceeds the Alaska Department of Environmental Conservation (DEC) action level of 70 ppt. The eight other wells that were tested ranged from not detected to 22 ppt.

<https://alaska-native-news.com/pfas-discovered-in-groundwater-near-dillingham-airport-firefighting-foam-discharge-areas/39699/>

ARIZONA

1/21/2019 Tucson International Airport

<https://cronkitenews.azpbs.org/2019/01/03/tucson-water-treatment-plant-contamination/#.XDde6Rmdz5E.facebook>

<https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0900684>

The 10-square-mile Tucson International Airport Area site is located in and next to Tucson, Arizona. The site includes the Tucson International Airport, portions of the Tohono O'Odham Indian Reservation (San Xavier District), residential areas of Tucson and South Tucson, and the Air Force Plant #44 Raytheon Missile Systems Company (AFP44). Former aircraft and electronics manufacturing activities, **fire drill training activities**, and unlined landfills contaminated groundwater and soil. Cleanup, operation and maintenance activities, and monitoring are ongoing.

COLORADO: Sugarloaf Fire Department Station 1 Well: [PFOA = 79 ppt; PFOS = 950 ppt], Station 2 Well: [above 70 ppt, numbers unavailable] Firefighting foam used at Sugarloaf Fire Department Fire district board members will join representatives from EPA, Boulder County Health Dept, and Colorado Dept. of Health & Environment in a community meeting to brief residents on the status of contamination. Boulder County Health Dept. paid for testing of 12 wells near the two fire stations. "The water quality control division of (the department) has allocated funds that we will be distributing to Boulder County Public Health and then we will work with both the Fire District and Boulder County Public Health and our Region 8 EPA

office to determine the best path forward in determining where and when we should best sample," said Dr. Kristy Richardson, environmental toxicologist for the Colorado Dept of Public Health & Environment

FLORIDA

1/21/2019 <https://www.tampabay.com/florida-politics/buzz/2019/01/03/florida-officials-delayed-telling-residents-about-bad-water/>

Lawson's home was one of three well sites — a Marion County fire station and Texas-based mining company Lhoist North America were the others — where preliminary tests indicated the water had elevated levels of the chemicals, which early studies have suggested can be carcinogens. Other impacts in humans include high cholesterol, thyroid disorders, adverse reproductive and developmental effects and some types of cancer.

In September state health officials began discussing means of informing the Fire College, but it wasn't until late October that they discussed notifying the rest of the nearby community.

The department notified residents on Nov. 5 — two months after the Fire College started using bottled water and three days after tests results showed contamination in their wells.

Water contamination near the Fire College was made known to officials in early September after results came back from testing done by the state's Department of Environmental Protection. Of the 80 to 90 wells in a mile radius around the college, 16 wells were initially tested. According to emails obtained by the *Times/Herald*, levels of chemicals in the water at the college were found to be between 250 and 270 parts per trillion, more than three times higher than the advisable 70 parts per trillion for drinking water.

- On Sept. 9, the Fire College was given supplies of bottled water from the Department of Environmental Protection. On Sept. 12, the Fire College stopped using well water to prepare food in its cafeteria. During busy times of the year, about 50 students and 30 staff use the water on campus.

- On Oct. 2nd and 3rd, the DOH collected samples from 16 nearby wells, including the Lowell Correctional Institution (a women's prison), a convenience store/gas station, the mining company and seven residences.

- An Oct. 16 open house was scheduled to allow members of the public and the Fire College community to ask questions and get information about what was happening in their water supply. The open house was rescheduled due to limited time and resources after Hurricane Michael. It eventually happened on Dec. 4 — three months after the Fire College started using bottled water.

- On Nov. 2, the Department of Health got results back from the tests in early October and found four wells, including the Fire College, that showed elevated PFOS and PFOA levels.
- On Nov. 5 —two months after the Fire College started using bottled water and three days after test results showed far higher levels of contamination in their wells — letters were sent to notify Lawson and the fire station. On Nov. 6, Election Day, the mining business was notified. The Department of Environmental Protection installed filters for their wells and is providing a regular supply of bottled water for drinking, cooking, bathing and other household activities.

Those letters were supposed to be sent on Nov. 13, Beitsch said, but pushback from him and some of his colleagues spurred the Nov. 5 delivery.

All Lawson could gather from the two-page letter was that the Fire College might be connected to the water problem.

"We've known the Fire College was there. It's been there forever," she said. "I knew they did testing back there — fire drills and stuff like that — but I assumed they did water or whatever. I didn't even know they use a foam."

<https://www.ocala.com/news/20181224/ex-workers-at-florida-state-fire-college-file-suit>

The Florida Department of Environmental Protection tested wells at the college in August. In two of the three wells, which provide the college's water supply, officials found levels of the toxic chemicals in the water to be between 250 and 270 parts per trillion, almost four times higher than the EPA recommended 70 parts per trillion for drinking water.

MASSACHUSETTS

Barnstable County Firefighting Training Academy. Please see page 18 for PFOS contamination map of over 70,000 ppt noted in red dots.

http://www.newmoa.org/events/docs/259_227/GallagherMA_May2017_final.pdf

Martha's Vinyard, West Tisbury. Airport (added to list 12/13/18)

<https://vineyardgazette.com/news/2018/12/03/airport-officials-confirm-groundwater-contamination-pledge-more-testing?fbclid=IwAR06dKtkzh-J5xuHeAN3qTcdgJo3MLFhbrzulHqgerjZS7EshHubBlAr08>

From airport fire station training area.

MICHIGAN

Added 1/21/2019

https://www.michigan.gov/pfasresponse/0,9038,7-365-86511_82704-487728--,00.html

https://www.scribd.com/document/397761205/MAP-Bishop-Airport-Landfill-643963-7#from_embed

On October 16, 2018, MDEQ collected 6 groundwater samples on behalf of the city of Flint to analyze for PFAS. They were collected from the previously existing monitoring wells on the landfill.

On November 7, 2018, the MDEQ received the results from the groundwater sampling. The highest values were 176 ppt PFOS+PFOA, and 1,236.3 ppt total PFAS.

1/21/2019 MUSKEGON COUNTY, MICHIGAN:

https://www.mlive.com/news/muskegon/2019/01/pfas-found-in-20-additional-muskegon-area-drinking-water-wells.html?ath=3f9f78fa41012c192861e519f2dd9856&fbclid=IwAR1o8fqR1LlBh-EDpEXvWzMJBREY7DA9S9DaANv3kPIhy_KAaTEXO2CIKYk#cmpid=nsltr_strybutton

In addition, the county is currently seeking its own engineering contractor for PFAS monitoring and potential remediation. Those bids are due on Jan. 17.

[Michigan's next water crisis is PFAS - and you may already be affected](#)

"We are ready to respond for the safety of our residents at any time," said Moore. "Any time we know of PFAS (close to the 70-ppt advisory level), and if residents are concerned, we do advise them to use bottled water, consider connecting to a municipal water source or get a filter in their homes."

Steve Fink, an engineer working with Muskegon County Public Works, said the county won't know how much monitoring or remediation will cost until a contractor can investigate the area and understand the scope of the problem.

Fink said the Norton Shores groundwater investigation was spurred by interviews with former city firefighters who said they used a firefighting foam that contained per- and polyfluoroalkyl substances, or PFAS, during training exercises at four points around the airport for several decades.

MINNESOTA

(by far the most comprehensive study of what was used, how stored, and when used) **DELTA PROJECT NO. 19382-DEL0** These three reports are based mainly on municipal/rural AFFF at fire fighting training locations:

2008: <https://www.pca.state.mn.us/sites/default/files/pfc-foamreport-addendum.pdf>

2009: <https://www.pca.state.mn.us/sites/default/files/c-pfc1-05.pdf>

from page 22: The PFOA HRL was exceeded in several groundwater sample collected during the current scopes of work and previous scopes of work with laboratory results being presented in this report: 1,260 ng/L PFOA was detected in the groundwater sample collected from the Burnsville B-3 boring; and, **PFOA concentrations ranging from 958 ng/L to 286,000 ng/L were detected in all four groundwater samples collected in May 2009 from borings B-1 through B-4 at the MSP Airport.** PFOA concentrations detected in other groundwater samples collected during the current scopes of work and in Fridley and Luverne were less than 300 ng/L page 23: The PFOS HRL was exceeded in several samples collected during the current scopes of work: 522 ng/L PFOS was detected in the Burnsville B-3 groundwater sample; 483 ng/L and 789 ng/L PFOS were detected in the Bemidji B-1 and B-2 groundwater samples, respectively; and, PFOS concentrations ranging from 731 ng/L to 14,900 ng/L were detected in five of the six groundwater samples collected at the Marathon Refinery, including the duplicate sample. The only groundwater sample collected at the Marathon Refinery with a PFOS concentration of less than 300 ng/L was MW-101, which is located near Tank 120 upgradient of the firefighting training area. The PFOS concentrations in other groundwater samples collected during the current scopes of work and in Fridley and Luverne were less than 300 ng/L

NEW HAMPSHIRE

Windham, NH Fire Station Combined PFOA/PFOS: (Senior Center: 96 ppt; Fire Department building: 112 ppt; Dunkin Donuts/Bodega: 100 ppt) Firefighting foam used at local fire station In addition see also: NH DES Oct 2, 2017 letter to all fire stations after 6 of 7 wells tested elevated for PFOA. https://www4.des.state.nh.us/nh-pfas-investigation/wp-content/uploads/2017/11/Fire_Department_H2OSample.pdf

From Geoff Daly:

If you do not already have these NH Fire Stations with Well Contaminations from PFAS please include:-

- **Kingston NH detected 140 PPT in their water wells around the station.**
- **The main NH Concord training center the East side of the Airport, the First site is as you enter where they train for Aircraft fires. Then at the Rear of the Main Building are several training areas near the Soucook River.**
- **Brentwood Fire Academy off Rte101 on North Road behind the Rockingham Jail, beyond the Water Works are three major wells over 2,000+ PPT**
- **Franklin NH main Fire Station.**
- **Windham Station on N. Lowell Rd and Fellows Rd.**
- **Bow NH has 6 Fire Stations where PFAS has been detected at Elevated levels. I believe there are several others out towards Keen and up near Lebanon airport area.**

New York State

Suffolk County Firematics Training Facility PFOS (<2 ppt - 2540 ppt), PFAS (<2 ppt - 133 ppt) PFHxS: 528 ppt, PFHpA: 137 ppt, PFNA: 252 ppt Firefighting foam used at Suffolk County Firematics Training Facility *Firematics served as Suffolk County's firefighting training facility since 1959 and used PFC-containing foam until May 2016, when chemicals in the foam were classified as hazardous substances by NYS.* Hampton Bays Fire Station Combined PFOA/PFOS (as high as 85.8 ppt) Firefighting foam used at Fire Station *"In September 2017, two public water supply wells were closed in Hampton Bays when PFCs were detected. The suspected culprit is fire fighting suppressant foam that contained PFCs. A two-acre site that is owned by the Hampton Bays Fire District is now listed as a "potential hazardous waste site"*

<https://pfasproject.com/yaphank-firematics-site-ny/>

(added to list 12/13/18):

Stewart International Airport: and Stewart Air National Guard

https://www.dec.ny.gov/docs/remediation_hudson_pdf/newburghpfosangsmpltrptpart1.pdf

<https://www.riverkeeper.org/blogs/docket/nine-months-later-pfos-pollution-stewart-air-national-guard-base-continues-unabated/>

<https://www.cityofnewburgh-ny.gov/home/news/city-of-newburgh-announces-a-federal-lawsuit-against-the-us-air-force-nys-airport>

1/21/2019

<https://www.newsday.com/long-island/broohaven-lab-contamination-1.25118134>

Brookhaven Labs <https://www.bnl.gov/stakeholder/docs/CAC/Final10-11-18-CAC-PFAS-Presentation.pdf>

• Areas where firefighting foam was used • Airports • Regional fire training facilities • Local firehouses/substations? • PFAS detected in Long Island groundwater linked to firefighting foam. Examples: • Yaphank Fire Training Facility

Source of PFAS = Firefighting Foam Based upon review of available records and interviews with current long-term firefighters and retirees, identified eight locations where foam was stored or released: A. Trailer near Building 924 (1970) B. Area near Building 902 (1970) C. Former Bubble Chamber Experiment and Blockhouse Area (1973 [2 times], 1980) D. Former Firehouse (1966-1985) E. Current Firehouse (1986-2008)

• Results for western well field: • PFOS/PFOA concentrations up to 3,124 ng/L at the Current Firehouse • Other PFAS compounds were also detected •

- To date, installed 19 of the planned 32 temporary wells. Available results: o Former Firehouse ▪ PFOS/PFOA up to 5,371 ng/L

NORTH CAROLINA:

(added 12/13/18)

Piedmont Triad International Airport

https://www.greensboro.com/news/government/airport-area-residents-question-officials-about-possible-pfos-contamination-to/article_f28378a2-d932-5901-9b99-442ec05d0882.html

PFOS was heavily used in the airport area as a key ingredient in firefighting foams relied upon by PTI fire crews and other fire departments, both in training exercises and in fighting fires in the neighboring industrial area.

VERMONT:

<https://vtdigger.org/2018/09/17/state-launches-effort-collect-toxic-foam-local-fire-departments/>

WASHINGTON

Issaquah Fire Station; Tanker crash site PFOA (20-80 ppt; non-detect at tap). PFOS (600-2,200 ppt; non-detect at tap) PFBS: 69.5 ppt; PFHpA: 5.31 ppt; PFHxS: 47.3 ppt; PFNA: 22.1 ppt Firefighting foam used at Eastside Fire Rescue and firefighting foam sprayed during a tanker fire in 2002
Wisconsin Tyco-Ansul Fire Technology Center Marinette, Wisconsin Jan.22.2018: [Groundwater -- combined PFOA/PFOS: ND-1,653 ppt], [well water -- combined PFOA/PFOS: ND-690 ppt] **June 2018:** [Out of the 137 wells tested during winter 2017, 97 showed no contamination, 29 had PFAS below the EPA health advisory level of 70 ppt, and 11 had PFAS above the health advisory level. Tyco offered bottled water to homes that had their wells tested, and is still providing bottled water to 126 recipients. For the homes above the health advisory level, Tyco offered GAC water filtration systems to clean the water before use. Seven accepted the filters. In Spring of 2018, Tyco tested 129 wells, most of which were repeat tests but some of which were new. 71 showed no contamination, 23 showed PFAS below the health advisory level, and 1 showed above the advisory level.]

WISCONSIN

1/21/2019 this one is confusing. I'm not certain if it is one county and one mil airport fire department/training facility at one location.

<https://wkow.com/news/2019/01/10/residents-concerned-about-chemicals-found-in-city-well/>

<http://mejo.us/dane-county-airport-burn-pit-contamination-began-in-the-1950s/>

On December 9, 2018: Wisconsin State Journal published a story about PFAS.

On December 12, 2018: Dane County Airport Commission discussed the PFAS contamination at Truax for the first time (under the generic agenda item, “environmental matters update”). Three citizens, including me, attended. After giving a brief introduction about PFAS, Airport Director Kim Jones mentioned that after the June 18 potential RP letter was sent to the city, airport, and ANG (asking for burn pit investigations), *“There were some meetings held, and the Guard agreed to conduct those additional studies” and “a letter was returned to the DNR, signed by the Guard, by Mike Kirchner who is the airport’s engineer, and by the Mayor, stating that the Guard would take on this responsibility.”* Further, she noted that *“on completion of those studies, we’ll all work cooperatively to resolve any of the issues that are identified.”*

On Jan. 2, 2019: At my request, Kim Jones sent me the letter she referred to.

What is going on?

The burn pit history, arrangements that National Guard Bureau will take over the investigations, and the City and County approval of this, raise many questions:

- Why is ANG taking over these investigations even though they don’t own the land?
- What did county and city officials do with the findings of the 1989 Truax Field investigative report, if anything? Why were these reports buried?
- Who was found to be responsible for the burn pit after DNR’s 1990 letter posing this question?
- Why was the Darwin burn pit area never remediated?
- Why was this site never regulated by DNR under Remediation and Redevelopment?
- Why was Truax Field never put on the Superfund National Priorities List?
- Why aren’t the many other toxic contaminants (besides PFAS) at the burn pits being assessed?
- Why won’t DNR put documents from these burn pit investigations onto the BRRTS site so the public can access them (as we were told more than once by government officials would happen)?

Are government entities covering for others or are they all protecting each other?

° *Dane County owns the land in question.*

° *The military leases the land and is responsible for a significant portion of the contamination in many parts of Truax Field.*

° *The City of Madison once owned the land and is also responsible for some of the contamination over many decades.*

° *The County and City have authority through city and state regulations to require testing of contaminants that enter its stormwater system. Of course, the County also holds a stormwater permit jointly with the Air National Guard. Is this a conflict of interest?*

° *All these government entities have been discussing who was responsible for what and when, attempting to discern/limit liabilities. Does allowing the military take the lead on testing lead to limited or no liability for local government?*

And the public—until now—has known nothing about this.

[1] This study of a military fire pit abandoned 20 years prior found total PFAS levels in the millions of parts-per-trillion (ppt) (the EPA's "health advisory" level for PFAS is 70 ppt).

[2] See here and here and here—from Sharon Lerner's excellent piece "The Military is Spending Millions of Dollars to Replace Toxic Firefighting Foam with Toxic Firefighting Foam."

From this REPORT by Air National Guard / Truax Field:

<https://cswab.org/wp-content/uploads/2018/08/Truax-Air-National-Guard-Phase-1-PFAS-Inspection-Report-March-2018.pdf>

8.1 PRL 1: Building 430 (Current Fire Station) 8.1.1 PRL 1 Soil Analytical Results Seven soil samples (including one duplicate) were collected and analyzed from three borings as described in Section 6.3.2: 01SB01 from 0.5-1.0 and 4.5 to 5.5 ft. bgs; 01SB02 from 0.5 to 1.0 and 4.5 to 5.5 ft. bgs; 01SB03 from 0.5 to 1.0 and 4.0 to 4.5 ft. bgs. Analytical results from soil samples indicate PFCs were detected above the laboratory reporting limit, with the shallow sample in 01SB01 exceeding HA criteria for PFOS. PFOS was detected at a concentration of 1.32 mg/kg and PFOA was detected at a concentration of 0.00241 mg/kg. Comparison of soil analytical results to applicable screening criteria are presented on Table 2. The soil boring locations showing detected compounds are depicted on Figure 4.

AUSTRALIA: <http://fbeu.net/2007/03/safety-first-3m-foam-banned-return-to-sender/>

March 26, 2007

Previous emails in this chain

-----Original Message-----

From: d [Ex. 6 / Personal Privacy]
To: zkz1 <zkz1@cdc.gov>; fjh1 <fjh1@cdc.gov>; pjb7 <pjb7@cdc.gov>; kif5 <kif5@cdc.gov>
Cc: peter_clark <peter_clark@shaheen.senate.gov>; mark.dailey <mark.dailey@masenate.gov>; ashley_coulombe <ashley_coulombe@warren.senate.gov>; russell.halliday <russell.halliday@mail.house.gov>; mindi <mindimindiforcongress.com>; bilott <bilott@taftlaw.com>; president <president@pffm.org>; president.local1009 <president.local1009@gmail.com>; jason.burns <jason.burns@iafflocal1314.com>; rriley08 <rriley08@northshore.edu>; geoffdaly <geoffdaly@mkd-usa.com>; grevatt.peter <grevatt.peter@epa.gov>; dunn.alexandra <dunn.alexandra@epa.gov>; gpeaslee <gpeaslee@nd.edu>; lpetrick <lpetrick@iaff.org>; pmorrison <pmorrison@iaff.org>; paul.jacques <paul.jacques@pffm.org>; rwalsh4justice <rwalsh4justice@outlook.com>; kathycrosby <[Ex. 6 / Personal Privacy]>; carignan <carignan@anr.msu.edu>; kfent <kfent@cdc.gov>; acaban <acaban@med.miami.edu>; sshaw <sshaw@meriresearch.org>; jburgess <jburgess@email.arizona.edu>; pgrand <pgrand@hsph.harvard.edu>; hdavies <hdavies@kingcounty.gov>; geoff <geoff@geoffdiehl.com>; holly.davies <holly.davies@kingcounty.gov>; PaulJrCotter <PaulJrCotter@charter.net>; emily.sparer <emily.sparer@mail.harvard.edu>; mmaynard <mmaynard@NFPA.org>; JPauley <JPauley@nfpa.org>; mustafa <mustafa@hiphopcaucus.org>; aropeik <aropeik@nhpr.org>; karen.hensel <karen.hensel@nbcuni.com>; alicia.rebello-pradas <alicia.rebello-pradas@massmail.state.ma.us>; stefanit <stefanit@sbcglobal.net>; matthew.alba <matthew.alba@sfgov.org>; bobbyhalton <bobbyhalton@pennwell.com>; marr.jon [Ex. 6 / Personal Privacy]; billc <billc@pennwell.com>; sylvia <sylvia@toxicsaction.org>; shaina <shaina@toxicsaction.org>; brandon.kernen <brandon.kernen@des.nh.gov>; debra <debra@cleanproduction.org>; dbond <dbond@bennington.edu>; cell <cell@ffcancer.org>; quintquilts <[Ex. 6 / Personal Privacy]>; andres_hoyos <andres_hoyos@hassan.senate.gov>; wuc1959 [Ex. 6 / Personal Privacy]; carey <carey@careygillam.com>; dalmatprod <dalmatprod@outlook.com>; esmaynard <esmaynard@lakeland.com>; fastlerner [Ex. 6 / Personal Privacy]; genxthefilm <[Ex. 6 / Personal Privacy]>; mariah <mariah@mariahblake.com>; stephanie.ebbs <stephanie.ebbs@abc.com>; gretchen <gretchen@saferstates.org>; gretchen <gretchen@healthyhomeconsulting.net>; ANNAISE.FOUREAU <ANNAISE.FOUREAU@STATE.MA.US>; lyons.callie <lyons.callie@gmail.com>; andruvolinsky [Ex. 6 / Personal Privacy]; Judithaenck <[Ex. 6 / Personal Privacy]>; jeffknobbe <jeffknobbe@sbcglobal.net>; mick.tisbury <mick.tisbury@gmail.com>; info <info@attorneyjaymcmahon.com>; mindi.messmer <mindimessmer@leg.state.nh.us>; saundrea.shropshire <saundrea.shropshire@mail.house.gov>; sanfordlewis <sanfordlewis@strategiccounsel.net>; cdubay <cdubay@nfpa.org>; mindi.messmer <mindimessmer@leg.state.nh.us>; lhierl <lhierl@vermontconservationvoters.org>
Sent: Thu, Nov 8, 2018 9:10 am
Subject: 11.8.2018 Update: OHIO State Fire Marshal and Known FF Elevated PFAS Sites

All,

Yesterday we have learned that the Ohio State Fire Marshall has issued the following directive for AFFF.

In addition to this statement, we are adding the following OHIO Fire stations/Fire Training sites to the list below of known fire fighting sites.

Is it the EPA's duty to now notify each and every fire station of this issue? To provide testing, testing kits for fire station wells and nearby ground/water? Also, to collect/replace every fire station's pre 2003 AFFF as was done (voluntarily) in Massachusetts this year?

<https://www.mass.gov/news/commonwealth-begins-program-to-remove-legacy-firefighting-foams-from-fire-department>

Hasn't the recent 3M hidden testing documents shown EPA/CDC must protect the first responders?

Some of the documents had been under seal since 2005 as a result of a separate lawsuit over PFAS contamination in Minnesota. And the documents had been in the EPA's possession for at least 18 years: In 2000, 3M gave the EPA hundreds of documents it had withheld from the agency, resulting in more than \$1.5 million in penalties in 2006 for 244 violations of the Toxic Substances Control Act. Even so, for years the EPA did nothing. Even as a few government officials and company scientists understood the vast dangers they posed, PFAS were allowed to spread into groundwater and then drinking water, into people and their children, into animals, plants and the food system where they remain today.

In this case it was the ground water nearby the fire academy. Our concern is the water wells that firefighters use daily to make coffee, shower, cook, etc as unlike most 9-5 positions, they live/shower/cook in these fire stations.

11.6.2018 OHIO FIRE MARSHAL :

Fire Service Partner:

Our office has recently learned of an emerging environmental issue that may be placing your firefighters and communities at risk.

Class-B firefighting foam Aqueous Film-Forming Foam (AFFF) contains PFAS, a chemical recently found to cause groundwater contamination and other serious environmental and human health hazards.

While health impact studies are still being conducted, exposure (especially ingestion) to various PFAS substances can increase the prevalence of certain cancers, as well as cause damage to the liver, kidneys and other organs. PFAS are also extremely persistent in the environment and have been shown to bioaccumulate in wildlife.

To help mitigate this issue and minimize the risk of danger to your communities, I strongly urge you to take the following precautions:

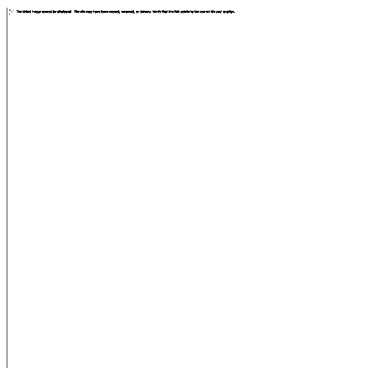
- **Conduct an inventory of all AFFF in your department and keep strict records regarding those compounds.** While risks exist with all AFFF-type foams, those manufactured prior to 2003 – as well as military specification foams – are even more hazardous. If you have these types of foam in your station, I strongly recommend prohibiting their use unless absolutely necessary.
- **Only dispose of AFFF through hazardous waste incineration.** Never dispose of these products through sanitary sewer systems as waste water plants do not remove PFASs from the water. Some states have even developed programs to have foam picked up and properly disposed of by hazardous waste contractors.
- **Never use AFFF for training purposes.** Fluorine-free foams are available for training, and class-A foam concentrates do not contain PFAS. Repeated application of AFFF to a training site has been shown to contaminate soil and ground water. Additionally, use of AFFF near well fields can result in contamination of an entire community's drinking water.
- **Conduct a risk-benefit analysis prior to any planned use of AFFF during an actual emergency involving flammable liquids.** If the fire can be controlled with water or class-A foam, those tactics should be considered first. If AFFF must be used for life-safety reasons, firefighters should only use the minimum amount needed, control runoff into waterways and report such usage to the Ohio Environmental Protection Agency (EPA).
- **Ensure all personnel are equipped with proper protective equipment.** This will help minimize firefighters' exposure when working with fluorinated foams.

For a comprehensive look at best practices for the use of class-B firefighting foams, [click here](#).

For more information on Aqueous Film-Forming Foam (AFFF), click [here](#).

Going forward, it will be vital to prepare for public inquiries regarding foam usage – including questions about class-A foams, which do not carry the same risks as AFFF.

Our office will continue to work with the EPA to provide education, guidance and mitigation strategies as we learn more about this serious safety risk.



Known Elevated PFAS Ohio Fire Fighting and/or Fire Training Sites:

What is most concerning about this particular site is the city did not inform the EPA:

<https://www.daytondailynews.com/news/local/ohio-epa-orders-dayton-take-action-groundwater-concerns/FjlAD68pWKXvmQggvztJCO/> :

In a Feb. 21 letter that the EPA’s Butler sent to Dayton, the director wrote the state agency was “disappointed” the city had not shared the information with the state about sampling results at the fire training center before mid-February. The letter does say EPA officials are confident Dayton officials will act to address the contamination.

<https://www.daytondailynews.com/news/dayton-contaminated-sites-could-pose-risk-mad-river-well-fields/mrRUeZV1Axzh21wYjMcF0K/>

Dayton: Fire Training Academy,

Dayton firefighting training center on McFadden Avenue .

Also: Page 52 of 77: <https://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/eh/water/powerpoints/Drinking-Water-Contamination-in-Ohio-by-PFAs.pdf?la=en>

Newport Volunteer Fire Department Hosted fire training for southern Ohio fire depts. (1964-1974) Extinguish fires produced using waste from industrial companies in the area (e.g., Union Carbide) Newport Wellfield installed 1969, with PW-2 150’ from burn pits VOC contamination found in PW-2 in 1986; PW-2 became a recovery well Because of the historical use of AFFFs, Ohio EPA sampled for PFOS and PFOA in October 2016. PFOS was detected in the recovery well (175 ppt), but not in the production well or finished water Continued operation of the recovery well should prevent PFOS from getting into the PWS raw water

Sincerely,
Diane Cotter
Rindge NH

-----Original Message-----

From: d <Ex. 6 / Personal Privacy>

To: zkz1 <zkz1@cdc.gov>; fjh1 <fjh1@cdc.gov>; pjb7 <pjb7@cdc.gov>; kif5 <kif5@cdc.gov>

Cc: peter_clark <peter_clark@shaheen.senate.gov>; mark.dailey <mark.dailey@masenate.gov>; ashley_coulombe <ashley_coulombe@warren.senate.gov>; russell.halliday <russell.halliday@mail.house.gov>; mindi <mindimindiforcongress.com>; bilott <bilott@taftlaw.com>; president <president@pffm.org>; president.local1009 <president.local1009@gmail.com>; jason.burns <jason.burns@iafflocal1314.com>; riley08 <riley08@northshore.edu>; geoffdaly <geoffdaly@mkd-usa.com>; grevatt.peter <grevatt.peter@epa.gov>; dunn.alexandra <dunn.alexandra@epa.gov>; gpeaslee <gpeaslee@nd.edu>; lpetrack <lpetrack@iaff.org>; pmorrison <pmorrison@iaff.org>; paul.jacques <paul.jacques@pffm.org>; rwalsh4justice <rwalsh4justice@outlook.com>; kathycrosby <Ex. 6 / Personal Privacy>; carignan <carignan@anr.msu.edu>; kfent <kfent@cdc.gov>; acaban <acaban@med.miami.edu>; sshaw <sshaw@meriresearch.org>; jburgess <jburgess@email.arizona.edu>; pgrand <pgrand@hsph.harvard.edu>; hdavies <hdavies@kingcounty.gov>; geoff <geoff@geoffdiehl.com>; holly.davies <holly.davies@kingcounty.gov>; PaulJrCotter <PaulJrCotter@charter.net>; emily.sparer <emily.sparer@mail.harvard.edu>; mmaynard <mmaynard@NFPA.org>; JPauley <JPauley@nfpa.org>; mustafa <mustafa@hiphopcaucus.org>; aropeik <aropeik@nhpr.org>; karen.hensel <karen.hensel@nbcuni.com>; alicia.rebello-pradas <alicia.rebello-pradas@massmail.state.ma.us>; stefanit <stefanit@sbcglobal.net>; matthew.alba <matthew.alba@sfgov.org>; bobbyhalton <bobbyhalton@pennwell.com>; marr.jon <marr.jon@gmail.com>; billc <billc@pennwell.com>; sylvia <sylvia@toxicsaction.org>; shaina <shaina@toxicsaction.org>; brandon.kernen <brandon.kernen@des.nh.gov>; debra <debra@cleanproduction.org>; dbond <dbond@bennington.edu>; cell <cell@ffccancer.org>; quintquilts <Ex. 6 / Personal Privacy>; andres_hoyos <andres_hoyos@hassan.senate.gov>; wuc1959 <Ex. 6 / Personal Privacy>; carey <carey@careygillam.com>; dalmatprod <dalmatprod@outlook.com>; esmaynard <esmaynard@lakeland.com>; fastlerner <Ex. 6 / Personal Privacy>; genxthefilm <Ex. 6 / Personal Privacy>; mariah <mariah@mariahblake.com>; stephanie.ebbs <stephanie.ebbs@abc.com>; gretchen <gretchen@saferstates.org>; gretchen <gretchen@healthyhomeconsulting.net>; ANNAISE.FOUREAU <ANNAISE.FOUREAU@STATE.MA.US>; lyons.callie <Ex. 6 / Personal Privacy>; andruvolinsky <Ex. 6 / Personal Privacy>; Judithaenck <Judithaenck@gmail.com>; jeffknobbe <jeffknobbe@sbcglobal.net>; mick.tisbury <mick.tisbury@gmail.com>; info <info@attorneyjaymcmahon.com>; mindi.messmer <mindimessmer@leg.state.nh.us>; saundrea.shropshire <saundrea.shropshire@mail.house.gov>; sanfordlewis <sanfordlewis@strategiccounsel.net>; cdubay <cdubay@nfpa.org>

Sent: Tue, Nov 6, 2018 7:35 am

Subject: PFAS detected at New Hampshire Fire Academy.

All,

I will add this latest site to my list of growing fire stations/training facilities that have tested positive for PFOS/PFOA water exposure. There are over 58,000 fire stations in the nation. Is this the tip of the spear?

<http://amp.wmur.com/article/pfas-detected-at-new-hampshire-fire-academy/24497676?fbclid=IwAR18Cj-Q7Mame-gDS88rFR8wvZl5ZXO-Po0EsoqQnUJX7zBUuhsV3IC6ybw>

Meanwhile, I ask again, who is responsible to send the word to every fire station in the nation to test their water wells? CDC? EPA? NFPA? IAFF?

If we know all of the military sites are testing positive for PFOS due to AFFF, why are we not testing the 'fire stations' where 'fire fighting foam' has/may have been used since the 80's?

This fire academy in NH should give the EPA and CDC cause to sound the alarm for the fire service.

October 2, 2017 NH DES sends this letter to every fire station in NH:

https://www4.des.state.nh.us/nh-pfas-investigation/wp-content/uploads/2017/11/Fire_Department_H2OSample.pdf

Again I ask, what agency of our government is going to sound the alarm for the fire service as is being done in the military?

The water issue at our fire stations does not exceed the need to protect the fire service regarding their turnout gear and the PFAS laden coatings of which we have no idea what chemicals are being used. Today we received this message:

We just got fitted for new turnouts not long ago. And I raised the question "is this gear free from PFOAs?" He stated that they were" is this bs? Or have they in fact stopped manufacturing with this chemical?

Manufacturers are able to state they do not make PPE with PFOA. They do not mention that the PFAS chemicals they use **may** degrade to form PFOA. If the testing done by Professor Peaslee on new, never-worn gear from 2004 has taught us anything, it is that there was PFOA/PFNA etc, in the PPE, and, that we have no idea how much is used. **It may very well exceed the minimum amount needed to achieve the NFPA standard for water resistance.** No one is watching how much is used. Concerning is that these manufacturers sit on our NFPA committees making decisions on everything from the balance of a helmet to the width of reflecting tape.

In California, labeling legislation under Prop 65 covers endocrine disrupting potential cancer risks. We have no such warning labels in PPE. Yet, we have no such warning in the fire service. While NFPA standardizes everything from the balance of the helmet to the width of reflecting tape, we have no PFAS labels in turnout gear, boots or gloves. Yet, should you purchase less fluorinated items in California, you would see these items labeled with Prop 65's statement that these items may contain endocrine disrupting chemicals.

In 2016 Dr Roger Klein gave an excellent presentation on the issue of PFAS and turnout gear. His presentation begins on page 43:

https://m.hemmingfire.com/news/get_file.php3/id/306/file/burlington+presentations+for+web+rev1.pdf

Please note, since 2006 the manufacturers of our PPE, and our AFFF have been made aware of the European Union's decision to phase out and restrict PFOA nationally.

http://hemmingfire.com/news/fullstory.php/aid/2660/PPE___Duty_of_Care_Forum_-_condensed.html

Here, EPA is still asking for comments.

If I knew how to sue the EPA and CDC for dereliction of duty I would do so today.

https://echa.europa.eu/documents/10162/13641/rest_pfoa_final_bd_en.pdf/61e81035-e0c5-44f5-94c5-2f53554255a8

Respectfully,
Diane Cotter
Rindge, NH

<http://amp.wmur.com/article/pfas-detected-at-new-hampshire-fire-academy/24497676?fbclid=IwAR18Cj-Q7Mame-gDS88rFR8wvZI5ZXO-Po0EsoqQnUJX7zBUuhsV3IC6ybw>

-----Original Message-----

From: d <Ex. 6 / Personal Privacy>

To: cdubay <cdubay@NFPA.org>; zkc1 <zkc1@cdc.gov>; fjh1 <fjh1@cdc.gov>; pjb7 <pjb7@cdc.gov>; kif5 <kif5@cdc.gov>

Cc: peter_clark <peter_clark@shaheen.senate.gov>; mark.dailey <mark.dailey@masenate.gov>; ashley_coulombe <ashley_coulombe@warren.senate.gov>; russell.halliday <russell.halliday@mail.house.gov>; mindi <mindi@mindiforcongress.com>; bilott <bilott@taftlaw.com>; president <president@pffm.org>; president.local1009 <president.local1009@gmail.com>; jason.burns <jason.burns@iafflocal1314.com>; rriley08 <rriley08@northshore.edu>; geoffdaly <geoffdaly@mkd-usa.com>; grevatt.peter <grevatt.peter@epa.gov>; dunn.alexandra <dunn.alexandra@epa.gov>; gpeaslee <gpeaslee@nd.edu>; lpetrick <lpetrick@iaff.org>; pmorrison

<pmorrison@iaff.org>; paul.jacques <paul.jacques@pffm.org>; rwalsh4justice <rwalsh4justice@outlook.com>; kathycrosby <Ex. 6 / Personal Privacy>; carignan <carignan@anr.msu.edu>; kfent <kfent@cdc.gov>; acaban <acaban@med.miami.edu>; sshaw <sshaw@meriresearch.org>; jburgess <jburgess@email.arizona.edu>; pgrand <pgrand@hsph.harvard.edu>; hdavies <hdavies@kingcounty.gov>; mindi <mindi@mindiforcongress.com>; geoff <geoff@geoffdiehl.com>; holly.davies <holly.davies@kingcounty.gov>; PaulJrCotter <PaulJrCotter@charter.net>; emily.sparer <emily.sparer@mail.harvard.edu>; mmaynard <mmaynard@NFPA.org>; JPauley <JPauley@nfpa.org>; mustafa <mustafa@hiphopcaucus.org>; aropeik <aropeik@nhpr.org>; karen.hensel <karen.hensel@nbcuni.com>; alicia.rebello-pradas <alicia.rebello-pradas@massmail.state.ma.us>; stefanit <stefanit@sbcglobal.net>; matthew.alba <matthew.alba@sfgov.org>; bobbyhalton <bobbyhalton@pennwell.com>; marr.jon <marr.jon@gmail.com>; billc <billc@pennwell.com>; sylvia <sylvia@toxicsaction.org>; shaina <shaina@toxicsaction.org>; brandon.kemen <brandon.kemen@des.nh.gov>; debra <debra@cleanproduction.org>; dbond <dbond@bennington.edu>; cell <cell@ffcancer.org>; quintquilts <Ex. 6 / Personal Privacy>; andres_hoyos <andres_hoyos@hassan.senate.gov>; wuc1959 <Ex. 6 / Personal Privacy>; carey <carey@careygillam.com>; dalmatprod <dalmatprod@outlook.com>; esmaynard <esmaynard@lakeland.com>; fastlerner <Ex. 6 / Personal Privacy>; geoffdaly <geoffdaly@mkd-usa.com>; genxthefilm <Ex. 6 / Personal Privacy>; mariah <mariah@mariahblake.com>; stephanie.ebbs <stephanie.ebbs@abc.com>; aropeik <aropeik@nhpr.org>; gretchen <gretchen@saferstates.org>; gretchen <gretchen@healthyhomeconsulting.net>; shaina <shaina@toxicsaction.org>; rwalsh4justice <rwalsh4justice@outlook.com>; lpetrick <lpetrick@iaff.org>; lpetrick <lpetrick@iaff.org>; pmorrison <pmorrison@iaff.org>; ANNAISE.FOUREAU <ANNAISE.FOUREAU@STATE.MA.US>

Sent: Sat, Oct 6, 2018 11:47 am

Subject: Robert Bilott has filed a Nationwide Class Action on behalf of all persons exposed to PFAS. His plaintiff; A Firefighter.

<https://theintercept.com/2018/10/06/dupont-pfas-chemicals-lawsuit/>

While we have been omitted from the National PFAS PEASE AFB Concept Plan, as we are occupationally exposed, and as we can secure no funding from our government, and are holding bake sales and car washes to fund our own studies, I am beyond elated to see this news today.

Thank you Robert Bilott, Thank you Sharon Lerner.

Sent: Wed, Aug 22, 2018 2:36 pm

Subject: Fire Station Contamination Across the Nation and reply to NFPA IS COMPLACENT IN THE ISSUE OF REVEALING THE CHEMICAL ADDITIVES AND AMOUNTS USED IN OUR PPE.

Chris,

I will be submitting a TIA.

Thank you,

Diane

Two outstanding updates:

8/21/18, Senator Shaheen's office notified us of the funding passed for the FF Cancer Registry that Senator was an originator for. Passed 85/0.

Please let me know what questions you may have. Senator Shaheen was a co-sponsor of this amendment as well as the original authorizing legislation last month:

Menendez-Murkowski #3705: Firefighter Cancer Registry

Summary This amendment would provide \$1 million in funding for the National Institute of Occupational Safety and Health (NIOSH) within the Centers for Disease Control to implement the Firefighter Cancer Registry Act of 2018. The Firefighter Cancer Registry Act was enacted on June 26th and establishes voluntary cancer registries for firefighters to

track data on cancer rates among firefighters and help identify cancer-related environmental risk factors associated with firefighting. The Firefighter Cancer Registry Act authorized \$2.5 million for implementation over FY 2018 to 2022, but did not actually appropriate any funding. To offset the \$1 million in new funding, the amendment would reduce General Departmental Management funding within the HHS Office of the Secretary by \$1 million. This amendment would help address concerns raised by firefighters and their families about the potential cancer implications due to per- and polyfluoroalkyl substances (PFAS) firefighting foams and other compounds used by civilian firefighting forces.

8/22/2018

Hi Diane --

I wanted to flag for you that Senator Warren filed an appropriations amendment which would require the Centers for Disease Control and Prevention (CDC) to conduct a study on the health implications for firefighters, police officers, and first responders of exposure to per and polyfluoroalkyl (PFAS) substances. Here is a link to the full text of the amendment. It would authorize \$5M for the study.

Thank you for your continued efforts to bring this issue to our attention, and I know the Senator was pleased to file this amendment in an effort to address this issue. Please let me know if you have any questions. Here is the quote from the Senator on the amendments. Best- Ashley

"As they work to keep our families and neighborhoods safe, firefighters and first responders in Massachusetts and across the country expose themselves to harsh chemicals and put their health at risk," **said Senator Warren.** "The amendments I filed today would allow us to collect better data on this problem so we can better protect all of our first responders who put their lives on the line for us every day. We owe it to them to do everything we can to protect their health and safety."

<https://www.warren.senate.gov/imo/media/doc/PFAS%20amdt.pdf>

Such great news for the fire service ... funding for the registry, and the potential PFAS studies that are long overdue.

All, please see below for the numerous fire stations that have been contaminated by AFFF.

<https://docs.google.com/spreadsheets/d/1HxLAzOmFdMh7V-mey4ExTPsnNKarEcGG6kIBWZH8auA/edit#gid=676990244>

ALASKA:

Fairbanks Regional Fire Training Center,

PFASs found in 26/33 private wells, 19 exceeded EPA health advisory (2015); {GHU municipal water 2018 -- PFOS: 2.4-2.9 ppt, PFOA: 2.9-3.5 ppt}; {Airport -- PFOA: 6.4 - 762 ppt} GHU municipal water 2018 -- PFHxS: 5.1-5.9 ppt, PFHxA: 2.8-3.2 ppt

Firefighting foam used from 1984 to 2004 in fire training exercises at the Regional Fire Training Center, and at Fairbanks International Airport since the 1980s

<https://dec.alaska.gov/spar/csp/sites/fairbanks-fire-training-center>

COLORADO:

Sugarloaf Fire Department

Station 1 Well: [PFOA = 79 ppt; PFOS = 950 ppt], Station 2 Well: [above 70 ppt, numbers unavailable]

Firefighting foam used at Sugarloaf Fire Department

Fire district board members will join representatives from EPA, Boulder County Health Dept, and Colorado Dept. of Health & Environment in a community meeting to brief residents on the status of contamination. Boulder County Health Dept. paid for testing of 12 wells near the two fire stations. "The water quality control division of (the department) has allocated funds that we will be distributing to Boulder County Public Health and then we will work with both the Fire District and Boulder County Public Health and our Region 8 EPA office to determine the best path forward in determining where and when we should best sample," said Dr. Kristy Richardson, environmental toxicologist for the Colorado Dept of Public Health & Environment

MASSACHUSETTS

Barnstable County Firefighting Training Academy.

Please see page 18 for PFOS contamination map of over 70,000 ppt noted in red dots.

http://www.newmoa.org/events/docs/259_227/GallagherMA_May2017_final.pdf

MINNESOTA (by far the most comprehensive study of what was used, how stored, and when used)

DELTA PROJECT NO. 19382-DEL0

These three reports are based mainly on municipal/rural AFFF at fire fighting training locations:

2008: <https://www.pca.state.mn.us/sites/default/files/pfc-foamreport-addendum.pdf>

2009: <https://www.pca.state.mn.us/sites/default/files/c-pfc1-05.pdf>

2010: <https://www.pca.state.mn.us/sites/default/files/c-pfc1-09.pdf>

from page 22:

The PFOA HRL was exceeded in several groundwater sample collected during the current scopes of work and previous scopes of work with laboratory results being presented in this report: 1,260 ng/L PFOA was detected in the groundwater sample collected from the Burnsville B-3 boring;

and, PFOA concentrations ranging from 958 ng/L to 286,000 ng/L were detected in all four groundwater samples

collected in May 2009 from borings B-1 through B-4 at the MSP Airport. PFOA concentrations detected in other

groundwater samples collected during the current scopes of work and in Fridley and Luverne were less than 300 ng/L

page 23:

The PFOS HRL was exceeded in several samples collected during the current scopes of work: 522 ng/L PFOS was detected in the Burnsville B-3 groundwater sample; 483 ng/L and 789 ng/L PFOS were detected in the Bemidji B-1 and B-2 groundwater samples, respectively;

and, PFOS concentrations ranging from 731 ng/L to 14,900 ng/L were detected in five of the six groundwater samples collected at the Marathon Refinery, including the duplicate sample. The only groundwater sample collected at the Marathon Refinery with a PFOS concentration of less than 300 ng/L was MW-101, which is located near Tank 120 upgradient of the firefighting training area. The PFOS concentrations in other groundwater samples collected during the current scopes of work and in Fridley and Luverne were less than 300 ng/L

NEW HAMPSHIRE

<http://amp.wmur.com/article/pfas-detected-at-new-hampshire-fire-academy/24497676?fbclid=IwAR18Cj-Q7Mame-gDS88rFR8wvZI5ZXO-Po0EsoqQnUJX7zBUuhsV3lC6ybw>

Windham, NH Fire Station

Combined PFOA/PFOS: (Senior Center: 96 ppt; Fire Department building: 112 ppt; Dunkin Donuts/Bodega: 100 ppt)

Firefighting foam used at local fire station

In addition see also: NH DES Oct 2, 2017 letter to all fire stations after 6 of 7 wells tested elevated for PFOA.

https://www4.des.state.nh.us/nh-pfas-investigation/wp-content/uploads/2017/11/Fire_Department_H20Sample.pdf

NEW HAMPSHIRE continued:

11.5.18 added by Geoff Daly:

If you do not already have these NH Fire Stations with Well Contaminations from PFAS please include:-

- Kingston NH detected 140 PPT in their water wells around the station.
- The main NH Concord training center the East side of the Airport, the First site is as you enter where they train for Aircraft fires. Then at the Rear of the Main Building are several training areas near the Soucook River.
- Brentwood Fire Academy off Rte101 on North Road behind the Rockingham Jail, beyond the Water Works are three major wells over 2,000+ PPT
- Franklin NH main Fire Station.
- Windham Station on N. Lowell Rd and Fellows Rd.
- Bow NH has 6 Fire Stations where PFAS has been detected at Elevated levels. I believe there are several others out towards Keen and up near Lebanon airport area.
- In MA, there is Westfield NG fire station on the NG AFB affecting the whole NW side of Westfield.

Regards,

Geoff

New York State

Suffolk County Firematics Training Facility

PFOS (<2 ppt - 2540 ppt), PFAS (<2 ppt - 133 ppt) PFHxS: 528 ppt, PFHpA: 137 ppt, PFNA: 252 ppt

Firefighting foam used at Suffolk County Firematics Training Facility

Firematics served as Suffolk County's firefighting training facility since 1959 and used PFC-containing foam until May 2016, when chemicals in the foam were classified as hazardous substances by NYS.

Hampton Bays Fire Station

Combined PFOA/PFOS (as high as 85.8 ppt)

Firefighting foam used at Fire Station

"In September 2017, two public water supply wells were closed in Hampton Bays when PFCs were detected. The suspected culprit is fire fighting suppressant foam that contained PFCs. A two-acre site that is owned by the Hampton Bays Fire District is now listed as a "potential hazardous waste site"

OHIO

Dayton Fire Training Academy The Ohio Environmental Protection Agency says it was also unaware of the contamination levels. The EPA says it only learned at a meeting with the city on Feb. 16 that sampling results in monitoring wells at the Tait's Hill well field showed high levels of a substance known as perfluoroalkyl substance (PFAS), a contaminant found in an old formula of aqueous film-forming foam that was used as a fire-fighting retardant. PFAS substances are also found in consumer products from clothing to cookware. The Tait's Hill well field, which is adjacent to the city's firefighting training center at 200 McFadden Avenue, is part of the much larger Mad River well field, which supplies water to a broad section of the region.

Newport Volunteer Fire Dept:

<https://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/eh/water/powerpoints/Drinking-Water-Contamination-in-Ohio-by-PFAs.pdf?la=en>

Newport Volunteer Fire Department Hosted fire training for southern Ohio fire depts. (1964-1974) Extinguish fires produced using waste from industrial companies in the area (e.g., Union Carbide) Newport Wellfield installed 1969, with PW-2 150' from burn pits VOC contamination found in PW-2 in 1986; PW-2 became a recovery well Because of the historical use of AFFFs, Ohio EPA sampled for PFOS and PFOA in October 2016. PFOS was detected in the recovery well (175 ppt), but not in the production well or finished water Continued operation of the recovery well should prevent PFOS from getting into the PWS raw water

WASHINGTON

Issaquah

Fire Station; Tanker crash site PFOA (20-80 ppt; non-detect at tap). PFOS (600-2,200 ppt; non-detect at tap) PFBS: 69.5 ppt; PFHpA: 5.31 ppt; PFHxS: 47.3 ppt; PFNA: 22.1 ppt
Firefighting foam used at Eastside Fire Rescue and firefighting foam sprayed during a tanker fire in 2002

Wisconsin

Tyco-Ansul Fire Technology Center Marinette, Wisconsin

Jan.22.2018: [Groundwater -- combined PFOA/PFOS: ND-1,653 ppt], [well water -- combined PFOA/PFOS: ND-690 ppt]

June 2018: [Out of the 137 wells tested during winter 2017, 97 showed no contamination, 29 had PFAS below the EPA health advisory level of 70 ppt, and 11 had PFAS above the health advisory level. Tyco offered bottled water to homes that had their wells tested, and is still providing bottled water to 126 recipients. For the homes above the health advisory level, Tyco offered GAC water filtration systems to clean the water before use. Seven accepted the filters. In Spring of 2018, Tyco tested 129 wells, most of which were repeat tests but some of which were new. 71 showed no contamination, 23 showed PFAS below the health advisory level, and 1 showed above the advisory level.]

AUSTRALIA:

<http://fbeu.net/2007/03/safety-first-3m-foam-banned-return-to-sender/>

Safety First. 3M foam banned – return to sender

March 26, 2007 Besides banning its use, Members are also instructed to search the Station for these chemicals, collect and tag them as a hazard and to notify the Department's Health Services Unit so that they can be removed from your workplace.

Members at Retained Stations in particular should have a good look for this foam as the Union believes that this foam constitutes both an unacceptable and avoidable risk to members and their families. It has come to light that the Australian Military believes this product can cause serious health problems including:

- Central nervous system depression,
- nausea,
- vomiting and sometimes diarrhoea in humans.

Other symptoms include:

- abdominal and lumbar pain,
- changes in the urine or absence of urine, and
- pathological lesions in the brain, lung, liver and heart.

Observations in animals suggest a remote possibility of pulmonary oedema (swelling and/or fluid accumulation in the lungs) and bone marrow depression. Experimental animal studies have also shown injury to the liver, kidney, spleen, and testes.

On that basis, Members should treat this material as hazardous by (as a minimum) not allowing it to come into contact with the skin or breath in its fumes.

All of these fire fighting training contamination sites are only a representation of the unknown sites. With the focus on military sites, the fire stations that support careers

of 25-35 years are going largely unnoticed, and undisclosed.

NH has been the only state to send a letter to every fire station in the state.

Many fire stations train in their own yards or in close proximity.

I am at a loss to understand why the organizations in power are not sounding the alarm as NH DES has done. IAFF, NFPA, CDC, EPA.

Who is going to warn the fire service to test their water?

Sincerely,

Diane Cotter
37 Delton Drive
Rindge, NH 03461

-----Original Message-----

From: Dubai, Chris <cdubay@NFPA.org>

To: d <Ex. 6 / Personal Privacy>; zkz1 <zkz1@cdc.gov>; fjh1 <fjh1@cdc.gov>; pjb7 <pjb7@cdc.gov>; kif5 <kif5@cdc.gov>
Cc: peter_clark <peter_clark@shaheen.senate.gov>; mark.dailey <mark.dailey@masenate.gov>; ashley_coulombe <ashley_coulombe@warren.senate.gov>; russell.halliday <russell.halliday@mail.house.gov>; mindi <mindimindiforcongress.org>; bilott <bilott@taftlaw.com>; president <president@pffm.org>; president.local1009 <president.local1009@gmail.com>; jason.burns <jason.burns@iafflocal1314.com>; rriley08 <rriley08@northshore.edu>; geoffdaly <geoffdaly@mkd-usa.com>; grevatt.peter <grevatt.peter@epa.gov>; dunn.alexandra <dunn.alexandra@epa.gov>; gpeaslee <gpeaslee@nd.edu>; lpetrack <lpetrack@iaff.org>; pmorrison <pmorrison@iaff.org>; paul.jacques <paul.jacques@pffm.org>; rwalsh4justice <rwalsh4justice@outlook.com>; kathycrosby <Ex. 6 / Personal Privacy>; carignan <carignan@anr.msu.edu>; kfent <kfent@cdc.gov>; acaban <acaban@med.miami.edu>; sshaw <sshaw@meriresearch.org>; jburgess <jburgess@email.arizona.edu>; pgrand <pgrand@hsph.harvard.edu>; hdavies <hdavies@kingcounty.gov>; mindi <mindimindiforcongress.com>; geoff <geoff@geoffdiehl.com>; holly.davies <holly.davies@kingcounty.gov>; PaulJrCotter <PaulJrCotter@charter.net>; emily.sparer <emily.sparer@mail.harvard.edu>; Maynard, Mary <mmarynard@NFPA.org>; Pauley, James <JPauley@nfpa.org>; mustafa <mustafa@hiphopcaucus.org>; aropeik <aropeik@nhpr.org>; karen.hensel <karen.hensel@nbcuni.com>; alicia.rebello-pradas <alicia.rebello-pradas@massmail.state.ma.us>; stefanit <stefanit@sbcglobal.net>; matthew.alba <matthew.alba@sfgov.org>; bilott <bilott@taftlaw.com>; bobbyhalton <bobbyhalton@pennwell.com>; marr.jon <Ex. 6 / Personal Privacy>; billc <billc@pennwell.com>; sylvia <sylvia@toxicsaction.org>; shaina <shaina@toxicsaction.org>; Dubai, Chris <cdubay@NFPA.org>

Sent: Fri, Aug 10, 2018 3:40 pm

Subject: RE: NFPA IS COMPLACENT IN THE ISSUE OF REVEALING THE CHEMICAL ADDITIVES AND AMOUNTS USED IN OUR PPE.

Dear Ms. Cotter – Attached is NFPA's response as well as our previous correspondences from May and June to you addressing NFPA's actions around contamination control and the NFPA standards development process. As always please do not hesitate to reach out if you have any questions or need any further assistance.

Respectfully,
Chris

Christian Dubai, P.E.
Vice President and Chief Engineer| NFPA

1 Batterymarch Park
Quincy, MA 02169-7471
+1 617-984-7340

www.nfpa.org

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From: d [Ex. 6 / Personal Privacy]

Sent: Wednesday, July 25, 2018 12:04 PM

To: didi116@aol.com; zkz1@cdc.gov; fjh1@cdc.gov; pib7@cdc.gov; kif5@cdc.gov

Cc: peter_clark@shaheen.senate.gov; mark.dailey@masenate.gov; ashley_coulombe@warren.senate.gov; russell.halliday@mail.house.gov; mindi@mindiforcongress.org; bilott@taftlaw.com; president@pffm.org; president.local1009@gmail.com; jason.burns@iafflocal1314.com; rriley08@northshore.edu; geoffdaly@mkd-usa.com; grevatt.peter@epa.gov; dunn.alexandra@epa.gov; gpeaslee@nd.edu; lpetrick@iaff.org; pmorrison@iaff.org; paul.jacques@pffm.org; rwalsh4justice@outlook.com; [Ex. 6 / Personal Privacy] carignan@anr.msu.edu; kfent@cdc.gov; acaban@med.miami.edu; sshaw@meriresearch.org; jburgess@email.arizona.edu; pgrand@hsph.harvard.edu; hdavies@kingcounty.gov; mindi@mindiforcongress.com; geoff@geoffdiehl.com; holly.davies@kingcounty.gov; PaulJrCotter@charter.net; emily.sparer@mail.harvard.edu; Maynard, Mary <mmaynard@NFPA.org>; Pauley, James <JPauley@nfpa.org>; Dubai, Chris <cdubay@NFPA.org>; mustafa@hiphopcaucus.org; aropeik@nhpr.org; karen.hensel@nbcuni.com; alicia.rebello-pradas@massmail.state.ma.us; stefanit@sbcglobal.net; matthew.alba@sfgov.org; bilott@taftlaw.com; bobbyhalton@pennwell.com; [Ex. 6 / Personal Privacy] billc@pennwell.com; sylvia@toxicsaction.org; shaina@toxicsaction.org

Subject: NFPA IS COMPLACENT IN THE ISSUE OF REVEALING THE CHEMICAL ADDITIVES AND AMOUNTS USED IN OUR PPE.

Good Morning,

I am still awaiting a reply from NFPA on now the 3rd request to initiate a task force surrounding the chemical additives in PPE, and station wear.

Some of you may not know that in station wear, the fire service is also wearing 'insect repellency, odor repellency, in addition to flame retardants and water resistant. This is in addition to the 'turnout gear' chemicals.

If NFPA is focused on exposing the products of combustion, they are negligent in any action to reveal and determine the chemicals used without regulation as 'coatings' and 'protection' in station wear, and turnout gear.

I have attached a 2017 document showing the NFPA's participation, initiation, and knowledge of permeation of particles dangerous to the firefighter's body.

<http://www.dupont.com/dpt/nomex-knowledge-center/industries/emergency-response/smoke-particle-risk-exposure.html>

While we await Commander Kenny Fent's response to our plea for a national protocol for the PFAS contamination of the fire service, I have place a call to Massachusetts Attorney General's office and will be speaking to Chief of Staff Alicia Pradas.

How may we form a group with the agencies in this email chain, to act on this issue?

EPA With the chemicals used in the gear Dr Gravett was concerned about waste/landfill/water,
CDC Exposure to the fire service in PPE, what is degrading in our stations?
NFFPA Initiate and fast track exposure to chemicals used in manufacturing process and coatings.
Mandate Chemical labels in our gear. Contents and amounts there of.
IAFF Take full charge of this issue for all above. You are the body to do this

Congressman McGovern, Senator Warren, Senator Shaheen, Please expedite our request to add the fire service to the National PFAS Registry.

This week, we saw the first 'PFAS Warning Label' in fire fighter equipment, it was sent to us by a firefighter in California. It is the direct result of SB 6413

https://www.shelbyglove.com/index.php?main_page=product_info&cPath=1_16&products_id=53

If we are putting warning labels in FF equipment, and the NFFPA is not acting to protect the body of this nation's fire service. We have a much bigger problem than I thought.

One of the messages from today... these messages from firefighters with testicular cancer, prostate cancer, kidney cancer, come all day., EVERY, SINGLE, DAY.

PFOA IS A KNOWN CARCINOGEN. We did not know it was a byproduct of production., we had no idea it was degrading in our stations, we had no idea we were bringing it home to our families.... We had no idea of the staggering amounts used. NOW WE DO...

We have no idea what is being used in new gear.

All of the above agencies must act.

Sincerely,
Diane Cotter

Diane - Hi my name is Terry . My husband is a retired firefighter who was diagnosed 6/29/17 with Stage 4 Prostate cancer. It's a Gleason 9 with 1 metastasis to his sacrum. We have been told he has about a 30% chance of beating this . He is 52 yrs old. I was reading the article regarding the bunker gear . We are fighting with the State of Texas for workers compensation. My husband is the 7th man with the Bedford Fire Dept , during my husband's time (24 yrs)to be diagnosed. He is the only one of the 7 to still be alive .

Texas at this point is not recognizing cancer as a work related issue therefore the men here are dying with 1,000 of dollars in medical bills left to their spouses. I really feel the only way to get the government to recognize cancer has a work related illness at this point is - Class Action. I feel like this is the same fight that people had to go through to get asbestos recognized .

-----Original Message-----

From: d <Ex. 6 / Personal Privacy>
To: didi116 <didi116@aol.com>; zkz1 <zkz1@cdc.gov>; fjh1 <fjh1@cdc.gov>; pjb7 <pjb7@cdc.gov>; kif5 <kif5@cdc.gov>
Cc: peter_clark <peter_clark@shaheen.senate.gov>; mark.dailey <mark.dailey@masenate.gov>; ashley_coulombe <ashley_coulombe@warren.senate.gov>; russell.halliday <russell.halliday@mail.house.gov>; mindi <mindimindiforcongress.org>; bilott <bilott@taftlaw.com>; president <president@pffm.org>; president.local1009 <president.local1009@gmail.com>; jason.burns <jason.burns@iafflocal1314.com>; riley08 <riley08@northshore.edu>; geoffdaly <geoffdaly@mkd-usa.com>; grevatt.peter <grevatt.peter@epa.gov>; dunn.alexandra <dunn.alexandra@epa.gov>; gpeaslee <gpeaslee@nd.edu>; lpetrick <lpetrick@iaff.org>; pmorrison <pmorrison@iaff.org>; paul.jacques <paul.jacques@pffm.org>; rwalsh4justice <rwalsh4justice@outlook.com>; kathycrosby <Ex. 6 / Personal Privacy>; carignan <carignan@anr.msu.edu>; kfent <kfent@cdc.gov>; acaban <acaban@med.miami.edu>; sshaw <sshaw@meriresearch.org>; jburgess <jburgess@email.arizona.edu>; pgrand <pgrand@hsph.harvard.edu>; hdavies <hdavies@kingcounty.gov>; mindi <mindimindiforcongress.com>; geoff <geoff@geoffdiehl.com>; holly.davies <holly.davies@kingcounty.gov>; PaulJrCotter <PaulJrCotter@charter.net>;

emily.sparer <emily.sparer@mail.harvard.edu>; mmaynard <mmaynard@NFPA.org>; jpauley <jpauley@nfpa.org>;
cdubay <cdubay@nfpa.org>; mustafa <mustafa@hiphopcaucus.org>; aropeik <aropeik@nhpr.org>; karen.hensel
<karen.hensel@nbcuni.com>; alicia.rebello-pradas <alicia.rebello-pradas@massmail.state.ma.us>
Sent: Wed, Jul 11, 2018 3:16 pm
Subject: Re: Dangers of firefighting foam discussed in 2001, document shows

Good Afternoon,

It is now July 11th, with no reply from CDC, NFPA, or EPA. Someone must act. IMMEDIATELY PLEASE.

It these toxins were bright green, instead of invisible, with no smell or feel to them, I'm certain you would be acting.

They have no taste, no smell, no color. Yet, it is there. In STAGGERING AMOUNTS.

We need a task force formed specific for the fire service. We need to add the names of the fire service to the PFAS Registry that Senator Shaheen has negotiated for active military and veterans.

Also, I wish to add here, in this Wednesday July 11th note, that I was contacted by a 2nd level sales director from a FOAM Manufacturer in Scandinavia. Please read his dire message:

1. We will have a big big problem

2.



Do you know the FFFC group ?

3.



Delete this message sent from yourturnoutgear&pfoa

Jun 28Sent

4.



That is the fire fighting foam coalition.

Jun 28

5.



6. There was a meeting in India last week. A lot of company's that are also taking place in this FFFC where present

Jun 28

7.



Delete this message sent from yourturnoutgear&pfoa

Jun 28Sent

8.



I heard from my source they are going to start a big global lobby to all environmental groups/ communitys, governments to delay the regulations of C6 PFAS chemicals that are being used in AFFF, FFFP foam agent's

The NFPA will soon start working on investigating yo include pfas free fire fighting foams in the next addition of NFPA 11. FFFC will also lobby to influence the committee of the NFPA that when using PDAs free you need a lot more foam then using AFFF products, but this is not the case. If this happens, the industry will still need to use PFAS foam agents.

Jun 28

EPA, YOU MUST BEGIN TESTING WATER/DUST STUDIES IN OUR FIRE STATIONS ..

CDC YOU MUST PROTECT THE FIRE SERVICE. WE NEED BLOOD TESTING AS IS NOW BEING DONE IN THE STATE OF CALIFORNIA.

ZONYL WAS USED IN OUR PPE FOR YEARS, HERE IS THE PROOF: DUPON'TS OWN LAUNDERING RECOMMENDATIONS FOR TURNOUT GEAR FROM 1978.

This could literally mean we have 40 years worth of long-chain PFAS covering the walls in our stations where your fire fighters work, train, eat, sleep.

http://www.dupont.com/content/dam/dupont/products-and-services/personal-protective-equipment/thermal-protective-apparel-and-accessories/documents/DPT_Nomex_Laundering_Guide.pdf

**NFPA THERE ARE DANGEROUS CHEMICALS IN THE COATING OF OUR PPE.
PLEASE ACT TO PROTECT US AND IDENTIFY THE CHEMICALS USED AS YOU FAST TRACED TO PROTECT THE**

FIRE SERVICE FROM ACTIVE SHOOTER. THIS ISSUE IS VALID AND IT EFFECTS EVERY FIRE FIGHTER THAT DONS AND DOFFS PPE.

3RD REQUEST NFPA. FAST TRACK THE NEW INITIATION PROJECT I SUBMITTED THIS YEAR AS YOU DID FOR ACTIVE SHOOTER SCENARIO. .

AGAIN.. THIS ISSUE DOES NOT BELONG IN THE HANDS OF A RETIRED HOUSEWIFE.

IAFF YOUR VOICE IS NEEDED.

Sincerely,
Diane Cotter
Rindge NH 03461

-----Original Message-----

From: d <Ex. 6 / Personal Privacy>
To: zkz1 <zkz1@cdc.gov>; fjh1 <fjh1@cdc.gov>; pjb7 <pjb7@cdc.gov>; kif5 <kif5@cdc.gov>
Cc: peter_clark <peter_clark@shaheen.senate.gov>; mark.dailey <mark.dailey@masenate.gov>; ashley_coulombe <ashley_coulombe@warren.senate.gov>; russell.halliday <russell.halliday@mail.house.gov>; mindi <mindim@mindi4congress.org>; bilott <bilott@taftlaw.com>; president <president@pffm.org>; president.local1009 <president.local1009@gmail.com>; jason.burns <jason.burns@iafflocal1314.com>; rriley08 <rriley08@northshore.edu>; geoffdaly <geoffdaly@mkd-usa.com>; grevatt.peter <grevatt.peter@epa.gov>; dunn.alexandra <dunn.alexandra@epa.gov>; gpeaslee <gpeaslee@nd.edu>; lpetrick <lpetrick@iaff.org>; pmorrison <pmorrison@iaff.org>; paul.jacques <paul.jacques@pffm.org>; rwalsh4justice <rwalsh4justice@outlook.com>; kathycrosby <Ex. 6 / Personal Privacy>; carignan <carignan@anr.msu.edu>; kfent <kfent@cdc.gov>; acaban <acaban@med.miami.edu>; sshaw <sshaw@meriresearch.org>; jburgess <jburgess@email.arizona.edu>; pgrand <pgrand@hsph.harvard.edu>; hdavies <hdavies@kingcounty.gov>; mindi <mindim@mindi4congress.com>; geoff <geoff@geoffdiehl.com>; holly.davies <holly.davies@kingcounty.gov>; PaulJrCotter <PaulJrCotter@charter.net>; emily.sparer <emily.sparer@mail.harvard.edu>; mmaynard <mmaynard@NFPA.org>; jpauley <jpauley@nfpa.org>; cdubay <cdubay@nfpa.org>
Sent: Sun, Jul 1, 2018 1:13 pm
Subject: Dangers of firefighting foam discussed in 2001, document shows

Dear NIOSH Members; Dr Breyse, Dr Redfield, Dr Howard, and Dr Fent,

I am asking your immediate action on the matter of PFAS contamination in the fire-service for career, volunteer, wildland, and military first responders.

I ask you to take the time needed to read through this very long email, to understand what has happened to the fire service, and what we have found within the coatings of turnout gear PRIOR to ever being used, in addition to the known PFAS in AFFF.

Someone must initiate an investigation into the amount of PFAS in the fire stations including dust studies, water well (rural) and water systems (municipal) for the health and protection of this nations fire service members.

I have exhausted all possible avenues and efforts thus far. No one is acting on this issue within the federal government. It is imperative you take action to ensure the fire stations have immediate tests to verify the amounts of these chemicals within the walls and water systems.

In light of the newly released PFAS Study with much lower MRLs this issue must receive priority.

A synopsis of this entire decades long issue can be heard here on this link to a statement I read at the June 25th, 2018 New England EPA PFAS Community Agenda:

<https://www.facebook.com/1808869939437081/videos/2080367175620688/UzpfSTE4MDg4Njk5Mzk0MzcwODE6MjA4NTI5ODI1MTc5NDI0Nw/>

All, attached please see the link to the article I spoke of in the 9 minute video regarding the statement that in 2001 a NFPA Foam representative knew the AFFF was a PBT and word never filtered down to us:

<http://www.theintell.com/news/20170609/dangers-of-firefighting-foam-discussed-in-2001-document-shows#tncms-source=article-nav-prev>

Sincerely,
Diane Cotter
Private Citizen, wife of firefighter with cancer, now cancer-free.
Rindge, NH

From: d [Ex. 6 / Personal Privacy]
Sent: Monday, June 12, 2017 10:54 AM
To: Pauley, James <JPauley@nfpa.org>; Dubai, Chris <cdubay@NFPA.org>
Subject: Dangers of firefighting foam discussed in 2001, document shows

Dear Jim,
We entrust our safety and health to the manufacturers that sit at the NFPA tables.
http://www.theintell.com/news/horsham-pfos/dangers-of-firefighting-foam-discussed-in-document-shows/article_d4a5bbbc-4a25-11e7-ae80-4314c84eab0c.html#tncms-source=article-nav-prev
However, when this type of alarming discussion is happening during a NFPA committee, formed for the very reason to protect our fire fighters, and then remains secret for 16 years, it erodes the hard work of all committee members and the NFPA itself. It adds to the suspicion of organizations, and manufacturers who many now regard as deceptive. I realize this was before your time Jim, however, with a NFPA liaison present, how is it word never reaches our FF's?

Jim, we need to hear from you, directly. Please inform us what measures are in place to ensure, when word of any known toxin from a substance that our firefighters wear, or that is used in their duties, is uttered, that word gets through to the front lines.

In 2001, with all these committee members sitting at a NFPA table, not one person thought it their moral or legal duty to tell FF Nation.
This is why I am calling on NFPA, in their framework, require each (M) manufacturing committee member, who uses a known toxin, or a toxin is generated in the production of the product of gear or equipment used by firefighters, that it be mandatory the toxin be reported during the committee meeting and a chain be in place that it reach all FF's in this nation.

That if there is chemical registration in another country that classifies a substance as hazardous and it is used in our turnout gear, that NFPA be notified and that information be forwarded in the chain and posted on your NFPA website.
In addition, to restore faith, each (M) manufacturing committee member should sign a oath of knowledge, that their company has or has not been made aware of a hazard or toxin and should there be a toxin/hazard, that the NFPA liaison report that directly to you during that committee revision meeting.
Also, in lieu of the recent disclosure from the manufacturers, information should also posted on your website by the trade name of the end product, such as 'Kombat, Pioneer, Brigade, etc.', and the contents of the DWRs used on the material, so that each firefighter can check for themselves what the toxins are in their gear, as well as and amounts used of toxin. This is no longer an option. We have been lied to by the manufacturers and now demand to know what was in our gear and the amounts of same.

I am no longer able to keep up with the many daily messages from the Facebook page I manage titled 'Your Turnout Gear and PFOA' from fire fighters asking if PFOA is in their gear or was in their gear from 5, 10 or even 20 years ago.

We can no longer accept the position that it is **proprietary information** from manufacturers. With 65 of 100 firefighters diagnosed with cancer, and the knowledge of these toxins are in our gear, we have the right to expect all material be labeled. Manufacturers lost the CBI privilege when they neglected to tell us about the PFCs yet continued to produce literature about fire fighters and cancer while never acknowledging past and present PFC use.

In the released minutes of the 2001 NFPA Foam meeting, multiple manufacturers sat together

and not one party told the firefighters who use the end product. In the case of the PFOA on the gear, the chemical giants all knew in 2006 what was happening in Europe as they also served on the NFPA PPE committees and did not say a word. Nor did they bother to submit the form **"Statement of Problem and Substantiation for Public Input"** that I saw referenced in Structural FF PPE ROP's.)

For example, the financial statement of DuPont in 2007 references the European Union and new regulatory framework. This manufacturer should have told NFPA of the risks associated with their treated textiles in 2006 when they were informed by ECHA European Chemicals Agency:

https://s2.q4cdn.com/752917794/files/doc_financials/2007/DD_2007_10-K.pdf

Page 42, under Item 7. Part II :

In December 2006, the European Union adopted a new regulatory framework concerning the Registration, Evaluation and Authorization of Chemicals. This regulatory framework known as REACH entered into force on June 1, 2007. One of its main objectives is the protection of human health and the environment. REACH requires manufacturers and importers to gather information on the properties of their substances that meet certain volume or toxicological criteria and register the information in a central database to be maintained by a Chemical Agency in Finland. The Regulation also calls for the progressive substitution of the most dangerous chemicals when suitable alternatives have been identified. Pre-registration will occur between June 1, 2008 and November 30, 2008; complete registrations containing extensive data on the characteristics of the chemical will be required in 2010 if production usage or tonnage exceeds 1,000 metric tons per year; 2013 if it is between 100 and 1,000 metric tons per year; and 2018 if it is 100 metric tons per year or less. By June 1, 2013, the Commission will review whether substances with endocrine disruptive properties should be authorized if safer alternatives exist. By June 1, 2019, the Commission will determine whether to extend the duty to warn from substances of very high concern to those that could be dangerous or unpleasant. Management does not expect that the costs to comply with REACH will be material to its operations and consolidated financial position.

Should they not report a known SVHC they use in the gear they distribute to our firefighters, they do not deserve to be on NFPA committees deciding safety measures for our firefighters. Had the chemical giants told our firefighters of the issues they were facing in Europe back in 2006, we could have avoided much mis-information now. I receive messages daily from fire-fighters saying they were told the PFOA in the gear only happened in Europe. Or that they have been told there is nothing to worry about.

In this document, Dupont states the presence of PFOA:

http://www2.dupont.com/Media_Center/en_US/assets/downloads/pfoa/WhatisPFOA.pdf

• PFOA may be found at very low trace levels in some fluorotelomers. Fluorotelomer derivatives are a family of compounds used as ingredients in making firefighting foams and coatings because of their unique properties. They are also intermediates, or building blocks, used to manufacture stain-, oil- and water-resistant additives for some textiles, paper, coatings and other surfaces.

Yet here, in DuPont's May 2017 statement on PFOA there is no mention of the unintended by products:

<http://www.dupont.com/corporate-functions/our-company/insights/articles/position-statements/articles/pfoa.html>

Also confusing is the the conflicting information released over the last few years by the IAFF.

In 2011 the IAFF PFC Fact Sheet under Toxic Exposure (see attached), IAFF stated " *It is possible fire fighters are exposed to PFCs through fire fighting foam and to PFCs used to make fire fighting gear water and stain resistant.*"

As well as the 2015 IAFF Publication; Fire Fighters and the Evaluation of Cancer Causation, Pages 53 - 62: <http://services.prod.iaff.org/ContentFile/Get/10183> (see attached)

Perfluorinated Alkyl Substances (PFAS) Stain-resistant coating on upholstery, carpets, performance clothing, non-stick coatings on cookware, food wrapping, surfactants in firefighting foams Endocrine disruptors, liver, heart disease, cancer (PFOA)

and:

Teflon Chemical Might Be Unsafe at Any Level New study shows EPA drinking water standards 100X too high (Grandjean and Clapp 2015) PFOA (C8) Levels in Fire Fighters vs General Population

These messages contrast the IAFFs 2017 PFOA and Turnout Gear Statement that summaries the word of the manufacturers is sufficient, without the actual numbers of PFOA amounts used in the MSDS of the chemical coatings:

Conclusions

Exposure to PFOA is very common in US and Canadian populations due to its extensive past use in a wide range of products from carpets to stain and water resistant fabrics and upholstery to nonstick cookware. Importantly, PFOA use has been almost completely phased out in the US under the PFOA Stewardship Program and in Canada through recent regulation. Fire fighters may have additional PFOA exposure sources such as older Class B fire fighting foams. If PFOA is a combustion product of PFOA-containing consumer products made prior to phasing out use of this chemical, fire fighters will be exposed in fire suppression activities. However, the data are too limited at present to determine this. PFOA is unlikely to be a component in recently US manufactured turnout gear. However, if PFOA is a combustion product, it may be present as a contaminant on turnout gear. PFOA may also be present as a manufactured component of legacy turnout gear, or in turnout gear manufactured in other jurisdictions. The exposure contribution from any such PFOA content is likely to be minimal since volatilization from the manufactured product would be required.

Recommendations *At this time, IAFF does not recommend that legacy turnout gear be replaced outside of its lifecycle. Fire fighters wishing to minimize PFOA exposure should continue to wear their PPE, including SCBA, and regularly decontaminate their turnout gear. IAFF will continue to monitor developments and update this fact sheet should new information become available.*

Jim, as you are well aware past history in the fire service indicates many organizations working together, to support safety measures when brought to the attention of chiefs, NIOSH, NFPA, IAFF, etc. As was the case with Diesel Exhaust:

Diesel exhaust exposure is addressed by the National Fire Protection Agency (NFPA) in its 1500 standard. The standard states, "The fire department shall prevent exposure to firefighters and contamination of living and sleeping areas to exhaust." Many different products are available to remove diesel exhaust and minimize exposure to firefighters, including in-station exhaust systems, ventilation systems and apparatus-mounted removal systems. The above information can be used to justify the cost of these systems to help decrease the risk of cancer and improve the overall health of firefighters. <http://www.firehouse.com/.../cancer-and-the-fire-service>
see also: https://firefightercancersupport.org/wp-content/uploads/2013/06/diesel_emissions_in-fire_stations.pdf

As well as the IAFFs strong movement on Flame Retardants: Resolution 34 by the IAFF
(attached) <http://iaffconvention2014.org/resolution-no-34/>

84 RESOLVED, That the position of the IAFF will
85 continue to support affiliates at the local, state and
86 provincial level in any attempt to ban flame
87 retardants, industrial chemicals and other known
88 toxins through legislation, regulation or standard
89 changes; and be it further
90 RESOLVED, That the IAFF work to ensure that
91 the use of carcinogenic flame retardants and other
92 toxic chemicals are eliminated and safer alternatives
93 or methods are pursued, such as California's standard
94 TB-117-2013, including the development of non-
95 toxic standards through the National Fire Protection
96 Association, International Code Council,
97 Underwriters Laboratories and similar testing
98 Organizations; and be it further
100 RESOLVED, That the IAFF gather additional
101 scientific research and studies regarding fire fighter
102 exposure to carcinogens, toxic flame retardants and
103 other toxic chemicals, as well as continue to educate,
104 train and heighten the awareness of its members to
105 the dangers of these toxic chemicals and seek
106 preventative measures to lessen fire fighters risk of
107 developing cancer

Fire fighters need to see the same combined efforts again of these organizations working together to ensure that each fire fighter that dons the gear daily, is not wondering what they are wearing. They deserve nothing less.

In December of 2016, the International Agency for Research on Cancer, shows PFOA as a Group 2B toxin. It is no longer good enough to let manufacturers dictate what they will and won't share about the garments they provide. Not in light of the released minutes.

IARC Volume 110 / Perfluorooctanoic Acid, classifies PFOA (see IARC PFOA attached):

6.3 Overall evaluation Perfluorooctanoic acid (PFOA) is possibly carcinogenic to humans (Group 2B).

In the case of PFOA, we are not given the opportunity to see amounts as it is called 'proprietary information', as was noted in the notes and comments of the **ECHA Annex XV Early Comments, where textile manufacturers stated their amounts were 'proprietary' over and over.**

Our firefighters should have knowledge of what they are donning. They do not provide substance amounts, and leave it for firefighters to wonder if they will be the next to be diagnosed. In light of this weeks release of the NFPA 11 2001 minutes, the manufacturers have dug themselves quite a hole. I question if a chemical giant would put their child in turnout gear for decades at a time knowing what the amounts of PFCs were used (past or present).

While we are not discussing PFOA here in PPE in the US, there is plenty of discussion in Europe.

In February 2015, Delegates attending the highly successful **PPE & Duty of Care Forum** (see attached) held in Birmingham where manufacturers and health officials discussed PFOA and turnout gear.

Highlights:

<https://www.firerescueforum.com/content>

PPE & Duty of Care Forum 2016

Personal protective equipment (PPE) is the last line of defence for firefighters yet few Fire & Rescue Services fully understand how the latest generation of protective clothing works or how it should be managed effectively in the light of imminent EU-wide chemical restrictions. At this one-day conference, you can.

What will it cover?

- * Disposal of firefighting clothing that contains restricted chemicals
- * Maintenance of clothing containing restricted chemicals
- * Legal and financial obligations regarding current contracts
- * Legal and financial obligations of service contracts
- * Managing a potential transition to non-PFOA PPE

*** Dr Roger Klein of Cambridge (UK) and Christian Regenhard Center for Emergency Response Studies, John Jay College of Criminal Justice, CUNY, New York provided an insightful presentation on the history and latest developments regarding PPE and fluorochemicals in the fire service.**

Around three quarters of all global fluorotelomer production is used for treating textiles and paper in order to give water and oil repellent coatings. However, concern over the potential environmental impact of fluorochemicals has grown since the announcement in May 2000 that 3M would be phasing out PFOS-based production involving Lightwater and ATC foams as well as Scotchgard protective coatings.

Modern emergency services' PPE makes extensive use of fluorotelomer-treated fabrics for protection against both polar, i.e., water and alcohols, and non-polar, i.e., hydrocarbons, oils and greases, contaminants. The commonly used fluorotelomer acrylate and methacrylate polymers have been characterised traditionally by predominantly C8, C10, and C12 chain lengths, in order to get the required performance and durability of finish

However, increasing concern by regulatory authorities over the environmental and human health impact of releasing PFOA – and longer chain perfluorocarboxylic acids (PFCAs) –to the environment based on unacceptable PBT (persistent, bio-accumulative, toxic) profiling has led first to the voluntary PFOA Stewardship Program 2010/2015 by the US Environment Protection Agency and, more recently, to the European Chemical Agency (ECHA) PFOA Restriction Proposal initiated by the German and Norwegian governments.

The ECHA PFOA Restriction Proposal sets out to limit free PFOA to 25 parts per billion and PFOA precursors to 1,000ppb (or 1ppm) in all manufactured articles. This is a modification to the original overly strict limit of 2ppb for both free PFOA and PFOA precursors which followed an industry-wide consultation.

In order to give industry time to develop alternative technologies, however, there are specific time-limited derogations for firefighting foam of 1ppm for both PFOA and PFOA precursors, and for protective clothing used by the emergency services, police and military.

The situation is particularly acute for all-weather clothing and hazardous materials PPE since these applications have relied on using fluorotelomer polymers especially rich in C8, C10 and C12 fluorotelomer chains. All C8 fluorotelomer derivatives are known to breakdown to PFOA in the environment. By analogy, C10 and C12 fluorotelomers will yield perfluoro-n-decanoic acid and perfluorododecanoic acid, both of which are more toxic and bioaccumulative than PFOA. All PFCA's are highly environmentally persistent.

Since the introduction of the PFOA Stewardship Program industry has switched to fluorotelomer derivatives using so-called pure C6 compounds. Unfortunately even the very best of these are still contaminated with significant levels of C8 derivatives (and possibly C10, C12...) in terms of achieving the very low levels of PFOA precursors required by the ECHA Restriction Proposal, although free PFOA levels have been drastically reduced. Moreover, switching to pure C6 fluorotelomer derivatives has highlighted problems of achieving functional efficiency, especially in terms of the required levels of oil and water repellency, durability, and maintenance costs.

The PPE industry is thus left with the pressing problem of developing an alternative to fluorochemical treatment that retains functionality and durability.

*** Product development engineer Pavla Krizman Lavric at Tencate Protective Fabrics** concentrated on the importance of the outer shell as the first line of defence as well as the impact that the transition in chemistry from C8 chemicals to C6 chemicals will have on the protection level given by the gear when it comes to protection against splashes of oil, water and chemicals. These substances are found in AFFF surfactants in firefighting foams, wetting agents as well as textile finishes on the outer shell of firefighters' protective clothing.

This shell not only provides resistance to mechanical effects such as abrasion, rips, cuts and tears but also provides water, oil and chemical protection via a chemical film on the fibres' surface. This film prevents droplets from penetrating the fabric whilst allowing moisture vapour and air to transfer through.

Fluorocarbon finishes are currently used because the alternatives do not provide the water and oil repellence required by EN469, the European standard for firefighting protective clothing. These finishes are durable but do not last the lifetime of the garment. In fact, their performance reduces with every wash. The only way to reactivate their properties is to treat the garment with heat and eventually the finish needs to be reapplied.

Krizman outlined the complexity and the many challenges presented by current spray and liquid chemical resistance testing required to meet EN469. A whole load of factors influences the results, ranging from the pre-test wash treatment, the tightness of the weave of the fabric, the smoothness of the fabric and the type of fibres being tested.

Industry is currently working to meet these stringent tests using C6 chemicals rather than C8 chemicals, but research so far has shown that the only way of reaching similar levels of performance without C8 is to use more concentrated chemicals or in larger volumes, which in the future could create a new environmental issue. 'The performance goes down as the chain size of fluorocarbon goes down from C8 to C6.'

While the expectations are that these challenges will be met, many misconceptions remain. First is that the life of the fluorocarbon finish determines the life of PPE clothing. This is not the case. Proper care and maintenance and timely reapplication will result in optimal finish performance during the lifetime of a garment. The only way to ensure the performance of a garment is to have a good track-and-trace system in place, by working with laundries with the experience of treating these kinds of garments. 'Don't rely only on what you think you know, and be aware that fabric testing in a laboratory does not reflect real life,' concluded Krizman.

*** Bernhard Kiehl of WL Gore** drilled down on the role of durable water-repellent (DWR) finishes and their role in firefighting as well as the challenges being faced with the phasing out of C8 chemicals.

Kiehl demonstrated what happens when the DWR fails on the outer textile layer – it gets wet leading to thermal insulation loss and to discomfort for the wearer. If the garment is a pair of gloves, for example, hands get cold and lose tactility, making it difficult for the firefighter to perform simple tasks.

Commenting on the phasing out of PFOA, Kiehl highlighted that even though traces of PFOA had been found in apparel it had never been considered an immediate risk for end users: 'There are several agencies around the world looking into that and because the trace amount was so small and dermal intake isn't really a major route, studies have concluded that wearing the apparel or footwear is not a risk to the consumer.'

Jim, the statement from Kiehl regarding the 'trace amounts' as no PPE has been tested for PFOA past or present is untrue. Past amounts of DWRs on turnout gear have not been shared with anyone. For a statement like this to be made I wish to see the documents that support the amounts being called minute. There are tests that have shown the amounts on raincoats etc. but to equate the heavy duty repellents used on turnout gear to these amounts is a dangerous deception in my opinion.

The 2017 FIERO Symposium did not mention PFOA. Another missed opportunity. The 2019 schedule is not yet available. Hopefully discussion of PFOA will be listed : <http://fireppesymposium.com/schedule.php>

We also have documents confirming that fire fighters have higher numbers of pfoa in their serum:(see attachment): **Community Exposure to Perfluorooctanoate: Relationships Between Serum Concentrations and Exposure Sources**

In the general US population, median serum PFOA values are around 4 to 5 ng/mL, occasional values are above 20 ng/mL (4,5,9) with no significant gender differences.

Among those with potential occupational exposure, the highest median values were observed for firefighters at 453 ng/mL

We have spent years trusting the manufacturers, but the 2001 NFPA 11 minutes have changed that. With the knowledge of how the manufacturers operate in a professional setting such as NFPA which is intended to keep the health and safety of FF nation as its priority, and the deception practiced by omission, why would any man or woman don turnout gear without the labels showing exactly what is in it?

In 1999, this 3M document shows Protective Clothing as a 'end use' under their Apparel and Leather Fluorochemical Use, Distribution, and Release Overview Major Markets and End Uses See attachment: 3M Fluorochemical Use and Distribution...

In light of the dermal absorption routes, inhalation route, oral route, the fact that our fire fighters were never made aware of this toxin. Where it degraded in their stations where they work, eat, and sleep. Urgent attention should be given to this matter to test their fire-stations, and each fire fighter at the cost of the manufacturers. The same attention should be given to this matter as was done for Diesel Exhaust, including the NIOSH testing and the Flame Retardants.

Also concerning is how much PFOA is in the serum of fire fighters from years of exposure in their stations where they work, eat, and sleep from the PFOA that has degraded from the gear and is deposited in the dust and surfaces of the stations. Please see page 125 of the ECHA BACKGROUND DOCUMENT (attached) regarding BACK CALCULATING:

The back-calculated intakes from serum concentrations for occupationally exposed workers were in the range 0.8 to 13189 ng/kg bw/day with an overall mean intake of 298 ng/kg bw/day

Jim, the suspicion now raised by the recent release of comments made by manufacturers will only be overcome with full disclosure and knowledge. Below is a excerpt from a shareholders manual regarding the 2005 discussion of PFOA:

E.I. du Pont de Nemours and the Growing Financial Challenges of PFOA

https://www.healthandenvironment.org/docs/xaruploads/DuPont_Shareholders_Know_More.pdf (attached)

2005 - The Shareholder's Right To Know More Potential Impact on Product Lines

In the event that PFOA is restricted through regulation, or in the event that markets migrate away from the use of products made with PFOA, or that break down into PFOA, the impact on DuPont could be substantial. Analysts at JP Morgan have estimated that DuPont's PFOA-related product lines, fluoropolymers and telomers products, contributed about \$1.23 billion to 2003 sales and \$100 million to profit. DuPont's earnings in 2003 were \$973 million on revenue of \$27 billion. (page 23)

This report highlights the billion dollar business of protective gear each year in the US alone: <https://www.bccresearch.com/market-research/advanced-materials/advanced-protective-gear-armor-report-avm021h.html>

The U.S. market for advanced protective gear and armor has reached \$4.5 billion and \$4.7 billion in 2013 and 2014, respectively. This market is expected to reach at compound annual growth rate (CAGR) of 4.4% to nearly \$5.9 billion in 2019.

In light of Chris Hanauska's statement during the NFPA 2001Foam Committee;
"Persistent, Bioaccumulative, Toxic. Exhibition of one of these traits is bad, two makes
its use questionable, and when all three are present, it is a death warrant. PFOS has
all three.

So does PFOA Since 2012. Yet still no formal word to US Firefighters.

<https://enveurope.springeropen.com/articles/10.1186/2190-4715-24-16>

Conclusion

Due to its intrinsic properties, PFOA fulfills the REACH PBT-criteria. The next regulatory step will be the identification of PFOA and its ammonium salt (APFO) as SVHC according to REACH and the addition to the REACH Candidate List. As a second step, a restriction proposal will be prepared to include both substances and precursors into REACH Annex XVII.

Lastly Jim, the elephant in the room. All of these manufacturers are purchasing advertising in our fire related publications, magazines, online, at trade shows, supporting cancer studies, fire fighter cancer organizations, making videos, etc. The list is endless. It is suspicious when these manufacturers lecture our firefighters about washing their gear and their bodies and not storing their gear in UV, when the reality now shows they have known about PFOA and PFOS for decades. It appears that they are able to do what they wish as their pockets are so deep.

Jim, thank you for the time you have spent reading this letter today. I'm sure it wasn't easy to do at times, but please keep pushing forward in this matter as I'm certain you have every intention to. I will be mailing a letter to each of the parties listed below to secure their awareness and posting same to the page I manage.

Sincerely,
Diane Cotter

cc.

- **Congressman James McGovern (MA)**
Congressman Brian Fitzpatrick
State Rep Todd Stephens (PA)
State Rep office of Ken Donnelly (MA)
State Rep Bob Casey (PA)
Russell Halliday, Legislative Assistant/McGovern
David Swanson, General Counsel/Ken Donnelly

-

- **Christopher Dubay, VP/Chief Engineer NFPA**

-

- **John Howard, MD, Director NIOSH**
Frank Hearl, PE, Chief of Staff NIOSH

-

Harold Allen Schaitberger, General President IAFF
Patrick Morrison, IAFF Assistant to the General President
Larry Petrick, IAFF IAFF Deputy Director Occupational Health and Safety

-----Original Message-----

From: d <[Ex. 6 / Personal Privacy](#)>

To: jpauley <jpauley@nfpa.org>; cdubay <cdubay@nfpa.org>
Cc: peter_clark <peter_clark@shaheen.senate.gov>; mark.dailey <mark.dailey@masenate.gov>; ashley_coulombe <ashley_coulombe@warren.senate.gov>; russell.halliday <russell.halliday@mail.house.gov>; mindi <mindimindiforcongress.org>; bilott <bilott@taftlaw.com>; president <president@pffm.org>; president.local1009 <president.local1009@gmail.com>; jason.burns <jason.burns@iafflocal1314.com>; riley08 <riley08@northshore.edu>; geoffdaly <geoffdaly@mkd-usa.com>; grevatt.peter <grevatt.peter@epa.gov>; dunn.alexandra <dunn.alexandra@epa.gov>; gpeaslee <gpeaslee@nd.edu>; lpetrick <lpetrick@iaff.org>; pmorrison <pmorrison@iaff.org>; paul.jacques <paul.jacques@pffm.org>; rwalsh4justice <rwalsh4justice@outlook.com>; kathycrosby <Ex. 6 / Personal Privacy>; carignan <carignan@anr.msu.edu>; kfent <kfent@cdc.gov>; acaban <acaban@med.miami.edu>; sshaw <sshaw@meriresearch.org>; jburgess <jburgess@email.arizona.edu>; pgrand <pgrand@hsph.harvard.edu>; hdavies <hdavies@kingcounty.gov>; mindi <mindimindiforcongress.com>; geoff <geoff@geoffdiehl.com>; holly.davies <holly.davies@kingcounty.gov>; PaulJrCotter <PaulJrCotter@charter.net>; emily.sparer <emily.sparer@mail.harvard.edu>; mmaynard <mmaynard@NFPA.org>
Sent: Thu, Jun 28, 2018 1:08 pm
Subject: NFPA notification of PFOA statement at New England EPA PFAS Community Engagement, Exeter NH 6.25.2018

Good afternoon Jim and Chris,

This past week I attended the New England EPA PFAS Community Engagement :

<https://www.epa.gov/newsreleases/epa-hold-new-england-community-engagement-pfas>

This EPA agenda came about due to the PFAS contamination of waterways contaminated by AFFF, and, on the heels of the newly released ATSDR PFAS study. <https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=1117&tid=237>

I was able to give a statement on PFAS in the fire service (below).

After I was approached by Senator Shaheen's aide, Peter Clark, whom I spoke with this morning.

Yesterday I received two replies from both Peter Grevatt Dir, Office of Water and Alexandria Dunn RA of EPA District 1 New England.

They were unaware of the amounts of chemicals used in the coatings of our gear.

They have the same concerns as Professor Peaslee regarding the degradation and water run off from the chemical coatings in turnout gear during wash cycles and end of service.(see attached Professor Peaslee's reply..)

In March, I submitted a New Projects Initiation to NFPA (attached NEW PROJECT INITIATION 3.18) seeking to identify and label the chemical additives and amounts used in turnout gear.

The recent ATSDR PFAS Report has now recommended PFOA MRL at 11ppt. The fraction of the potential of PFOA that came from new, never worn turnout gear was 157 ppb PFOA. That is 14,000 times higher in just the fraction of the potential that is in the gear.

Although the manufacturers no longer use PFOA, it does occur as a by product of production. As well, the new 'short chain' chemistry aka Gen-X has yet to be proven safe.

I did receive a response from NFPA via phone call and email in regards to this initiation request and was given the guidelines on how to the to comment on the upcoming standards cycle.

Respectfully Jim and Chris in light of the newly released PFAS STUDY, **I wish to resubmit the NEW PROJECT INITIATION (attached) to you both today here publicly, and ask again that this matter be 'fast tracked' to form a task force surrounding this issue.**

h.	Provide an estimate on the amount of time needed to develop the new project/document This issue is IDLH. PFOA and some precursors are PBT. NFPA must act to 'fast track' this project. We have no knowledge of the chemicals and amounts we are wearing. We have no save handling methods for our new PPE and
----	--

station wear. Without knowing chemicals and amounts we may be exposing ourselves unnecessarily to more carcinogens or potential carcinogens.
--

Sincerely,
Diane Cotter

I also wish to state publicly, to all reading this email, THIS ISSUE NO LONGER BELONGS IN THE HANDS OF A RETIRED HOUSEWIFE.

-----Original Message-----

From: d <Ex. 6 / Personal Privacy>

To: peter_clark <peter_clark@shaheen.senate.gov>

Cc: mark.dailey <mark.dailey@masenate.gov>; ashley_coulombe <ashley_coulombe@warren.senate.gov>;

russell.halliday <russell.halliday@mail.house.gov>; bilott <bilott@taftlaw.com>

Sent: Thu, Jun 28, 2018 10:50 am

Subject: Fwd: Your Turnout Gear and PFOA statement at New England EPA PFAS Community Engagement, Exeter NH 6.25.2018

Peter, than you for our conversation this morning.
We are desperate for help on this issue.

As mentioned, we need blood testing and dust studies in our stations desperately. We need to know what is in the new coatings of our turnout gear. We have NO idea what is being used other than it is of the PFAS GenX family.

I have cc'd Russell Halliday from Congressman McGovern's office, Environmental Attorney Robert Bilott, Ashley Coulombe of Senator Warren's office, as well as Mark Dailey from Madam President Senator Harriet Chandler's office.

We have met with Congressman McGovern, Ashley Coulombe, and Mark Dailey in person. I did see Senator Warren in person at the Holden MA town hall in May. I was able to hand her a 160 page document on this issue regarding the deceptions, omissions, conflict of interest of the manufacturers that immerse themselves in our fire fighter cancer research and studies and say nothing to the fire service about PFOA/PFOS.

I have submitted the 160 page document to the DOJ at least 4 times now since February. No response. Except they did confirm they have it. But no one has called to ask any questions.

Please help. The manufactures have been able to line their pockets off the backs of fire fighters as there are no regulations on the chemicals. No regulations on how much they can use in our gear. They could be pumping much more than is necessary to inflate their stock price.

Thank you.

Diane Cotter

-----Original Message-----

From: d <Ex. 6 / Personal Privacy>

To: grevatt.peter <grevatt.peter@epa.gov>; Dunn.alexandra <Dunn.alexandra@Epa.gov>; geoffdaly <geoffdaly@mkd-usa.com>

Cc: gpeaslee <gpeaslee@nd.edu>; mindi <mindi@mindiforcongress.com>

Sent: Wed, Jun 27, 2018 10:56 am

Subject: Your Turnout Gear and PFOA statement at New England EPA PFAS Community Engagement, Exeter NH 6.25.2018

Good Morning all,

Dr Grevatt, Ms Dunn, thank you for hearing my statement Monday evening at the EPA PFAS Community Engagement.

Please understand we have been trying for well over one year to bring immediate attention to this issue for the fire service. I'm sure it may have been a shock to see how much PFAS was in our turnout gear.

I wanted to bring Professor Peaslee into the conversation please, as he first tested the gear last year for PFAS content, then he tested for PFOA content. He has the same concerns about the water as you folks do. (see Professor Peaslee's reply...attachment)

My grave concern is for what is degrading in the fire stations. But if we can address that while you folks look at the water issue then by all means. (See attachments PPE storage 1-4 for examples)

Geoff Daly, your input to Paul and I was invaluable and I'd like you to meet Professor Graham Peaslee.

Mindi has been working since last August to shed light on this issue, speaking at fire stations and writing articles to bring insight to the issue that the turnout gear coatings need nation wide recognition.

But truly, we are desperate for CDC to get on board with this issue. The staggering amounts of PFOA/PFNA that collect over and over in the area where a FF hangs their gear is keeping me up at night.

Please see below for supporting links to statements I made Monday evening.

Thank you all.
Diane Cotter

<https://www.facebook.com/1808869939437081/videos/2080367175620688/UzpfSTUwNzc0MDA5MToxMDE2MDU5MjUxNDcwMDA5Mg/>

Transcript from the first in the nation New England EPA PFAS Summit in Exeter, NH. 6.25.18

Thank you Organizers and EPA Panel Members for allowing me this opportunity to speak.

My name is diane cotter, I am here with my husband, Lt Paul Cotter, retired, 28 year veteran, Worcester Fire Department . And cancer survivor.

My community is the 1.3 million firefighters in this nation who have been completely overlooked in this PFAS catastrophe.

America's firefighters have been on the front line of PFAS exposure since 1983 using it in AFFF, being sprayed in our faces, wading in it, having turnout gear soaked in it, and exposing our families to it after bringing gear home.

We were not aware how toxic this substance was. This turnout gear I have is from 2004, it is new and never worn or 'contaminated' as the fire service would say. Jan of 2018 our grassroots effort acquired Professor of Physics Graham Peaselee, of Notre Dame Univ to test it for PFAS content. Just the 'fraction of the potential' that is in this gear tested at 157 ppb PFOA and 257 PFNA.

THAT IS 14, 000 times the newly set recommended limit of PFOA.

Turnout gear has been impregnated with PFOA since 1999 (at least) to meet NFPA water repellent STANDARDS. We were never made aware. We do not know how much. Only our gear manufacturers have that information. We sweat in this gear, our body temperature rises and our skin absorbs these toxins. We start our careers in our child bearing years. PFOA and PFOS are designated by California Prop65 as causing 'reproductive cancers'.

In 2006 the European Chemical Agency (ECHA) notified gear manufacturers they would be restricting PFOA in 'textiles'. One of those textiles is firefighter PPE. By 2012 PFOA was designated a Substance of Very High Concern there. Gear manufacturers were made aware of the decision to restrict the amount of PFOA in turnout gear to 25ppb and 'precursors' to 1ppm.

http://www.hemmingfire.com/news/fullstory.php/aid/2601/Six-year_PFOA_reprieve_for_firefighters_protective_clothing.html

To date they have not advised the US of this issue. While the manufacturers are discussing and teaching about the issue in Europe, they have not mentioned it here. <https://www.firerescueforum.com/content>

They minimized the issue when it came up recently in a firefighting trade magazine published by 'Station Pride' titled 'The Real Cancer in Your Gear'. <https://station-pride.com/2017/03/28/the-real-cancer-in-your-gear/>

We are in a particularly high risk exposure setting as our gear has been degrading in our fire stations where we work, eat, sleep, since 1999.

The coating degrades in UV lighting, in many stations our gear is stored in open lighting next to apparatus in bays. Paul's station had 80 sets of gear rotating through his station in one week. The gear is designed to be used for 10 years. Over 20 years we have had thousands of sets releasing particles of PFOA into our stations.

The new short chain coatings are also a concern. NH State Rep and Enviro Scientist Mindi Messmer wrote an article on this issue titled Firefighter Cancer Quadfecta.

<https://www.firefighternation.com/articles/2018/06/firefighter-cancer-quadfecta.html> ;;

From trade magazine FireFighter Nation:

The replacements, termed "short chain PFCs" were sported as better for the environment and public health. However, [scientific studies conducted in laboratory animals](#) indicate that the short chain replacements could be more toxic to humans since they accumulate longer in organs than the long chain legacy compounds. This may be the cause of cancer incidence in younger firefighters.

I have been advocating for a national health study specifically focused on firefighters to assess the health outcomes because they are highly exposed. It is often difficult to tie causation with cancer or other chronic diseases. Focusing on the highly exposed populations is more likely to carefully evaluate possible negative health outcomes for exposures to PFCs. This should include, at a minimum, thorough cancer screening and annual serum PFC monitoring of firefighters to provide longitudinal data to assess health outcomes (see Table 2). It is not enough to have a cancer registry, we have to prevent cancer by taking proactive steps to identify and prevent exposures in while firefighting, in fire stations, and in the turnout gear before they make firefighters sick.

To date there has not been a PFAS dust study done in our stations. Yet, biomonitoring has shown firefighters PFOA serum tested in ranges from 243 ng/mL to 423 ng/mL from a 'yet unknown source'. The 'DuPont Water Works' plant workers were considered high at 32 ng/mL.

Adding to this concern is the October 2, 2017 NH DES letter to every fire station in NH that of 6 of 7 New Hampshire fire stations water wells tested at 'elevated' levels of PFAS.

https://www4.des.state.nh.us/nh-pfas-investigation/wp-content/uploads/2017/11/Fire_Department_H20Sample.pdf

In 1992 DuPont's own scientist learned their PFOA caused testicular cancer. Testicular cancer is the number one cancer in the fire service. DuPont is a manufacturer of our gear. They have yet to tell us about this. They are immersed in every aspect of fire fighter cancer research, and teaching prevention methods. In 2006 they notified shareholders that 'any attempt to regulate PFOA would impact their bottom line'. They never shared that with us either. In 2005 the United Steelworkers Union advised Gore also a turnout gear manufacturer, and DuPont, to notify the end user of the harmful effects of PFOA. Neither did. See attached (DuPont Shareholders.... page 29)

<https://www.cleanlink.com/news/article/Steelworkers-Union-Warn-of-Harm-from-Teflon-Related-Chemical--3717>

On September 5, 2017, Environmental Attorney Robert Bilott, C8 Science panel's Dr Paul A Brooks, and Fire Chief Jeff Hermes demanded testing and studies of the EPA, CDC/ATSDR, and US Attorney General on behalf of all first responders US due to their exposure from foam and gear.

<https://www.documentcloud.org/documents/3988104-Firefighter-Letter.html>

With NO regulations for these chemicals, manufacturers are under NO obligation to tell us what we are wearing, or spraying. They defiantly refuse to give us that information citing 'proprietary information'. They have even lobbied for and win the right to NOT put warning labels in our turnout gear. See here for the 'Liability Bill'; https://www.femsa.org/whois_femsa/history/ ;;

Our manufacturers sit on NFPA committees deciding safety standards of gear, from the balance of a helmet to the width of reflective tape. but are under no obligation to advise of the chemicals in our gear. They never did. Not once.

The newly released PFAS study mentions FF occupational and high risk of exposure numerous times.

Yet the fire service has been omitted from the multi million dollar PFAS Study award.

We respectfully ask Senator Shaheen and Massachusetts Senator Elizabeth Warren to immediately add this nations fire fighters to the PFAS Registry along with the already chosen active military and veterans.

The EPA and NIOSH have been kicking this issue of occupational exposure and setting limits down the road for over 40 years. Last week I shared a 1977 NIOSH report titled " Criteria for a recommended standard - occupational exposure to DECOMPOSITION PRODUCTS of FLUOROCARBON POLYMERS". Here in 2018 we are seeing the same thing.

(see attached cdc_19394_DS1)

Under both Democratic and Republican leadership the EPA and CDC have been a catastrophic failure to the fire service. Hasn't anyone wondered about the firefighter they see covered head to toe in A-tripleF?

After 40 yeras of undecisivness, the fire service took matters into its own hands. Washington State Council of Fire Fighters and Toxic Free Futer passed SB 6413 (attached) limiting the use PFAS in AFFF and requiring labels be added advising the wearer of PFAS exposure in turnout gear.

The Professional Fire Fighters of Massacusetts and Toxics Action Center are both on board with this.

Last week the PFFM has voted unanimously to make PFAS legislation a priority.

The fire service can do this state to state to protect ourselves and fellow citizens.

And we WILL get it done.

But isn't that your job?

thank you.